Public Utilities

FORTNIGHTLY

Volume 57 No. 2 January 19, 1956

THE BASIC DANGER IN THE "A" POWER PROGRAM
By the Honorable John P. Saylor

« »

Utility Public Relations Practices
By Dan E. Karn

« »

Why Colleges Ask Business for Money
By James H. Collins

« »

Rising Costs in the Gas Distribution Industry

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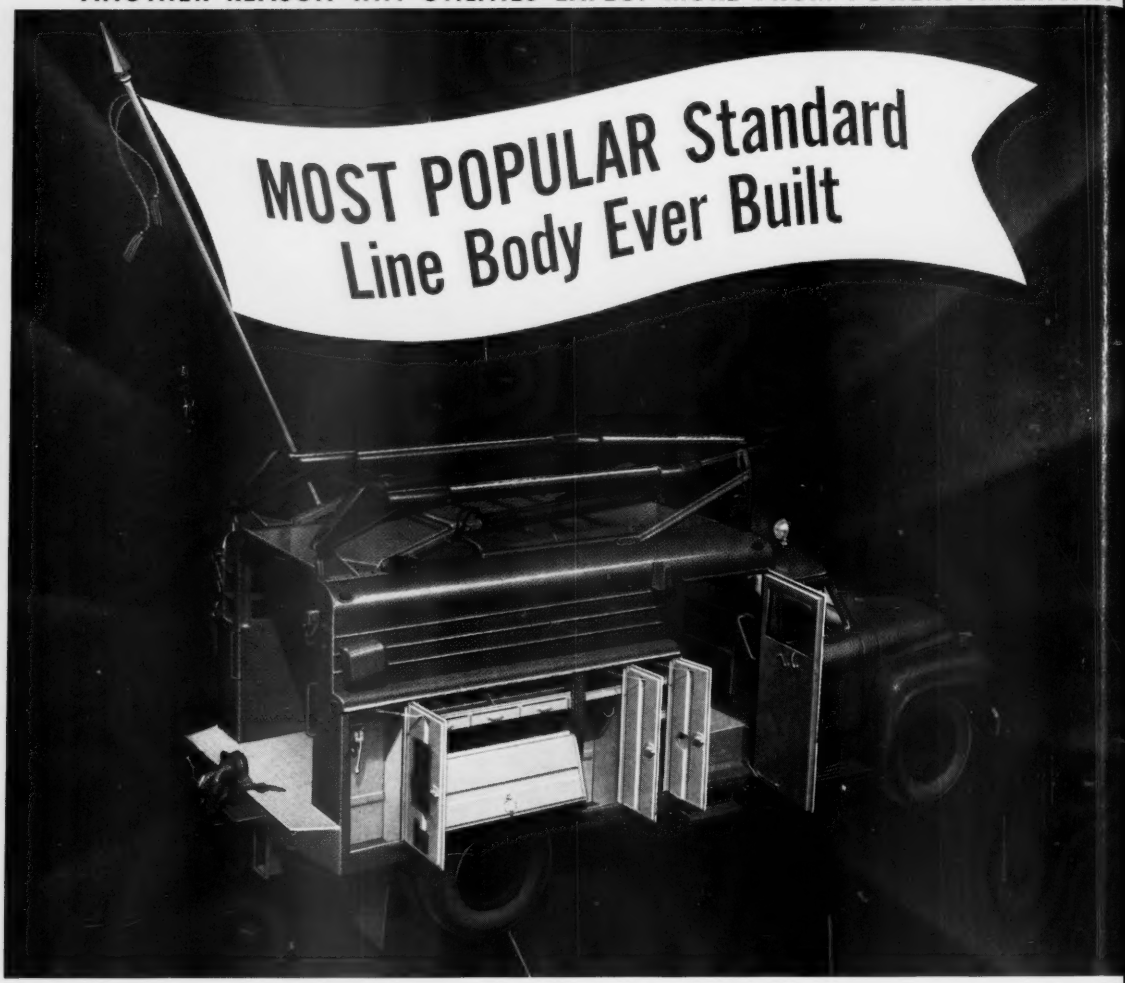

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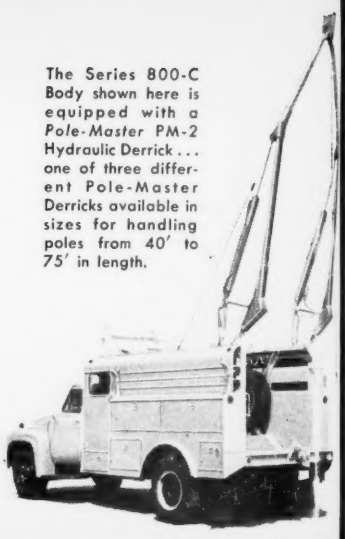

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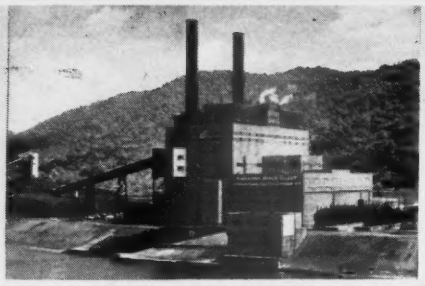

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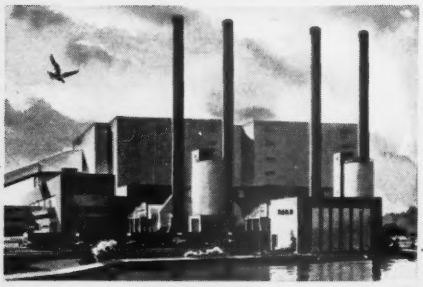

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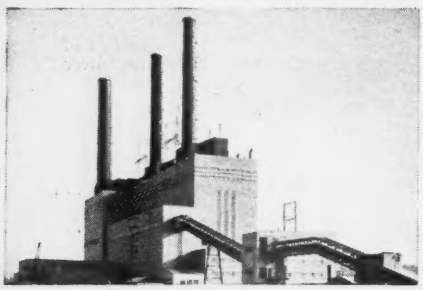

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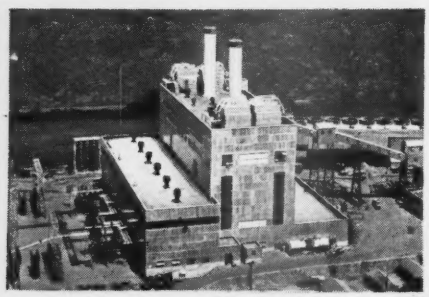

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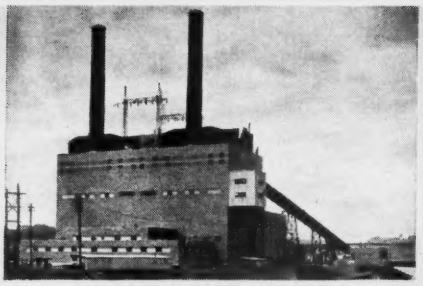

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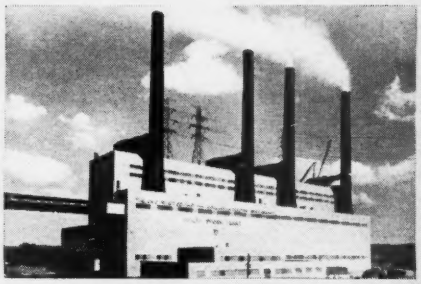

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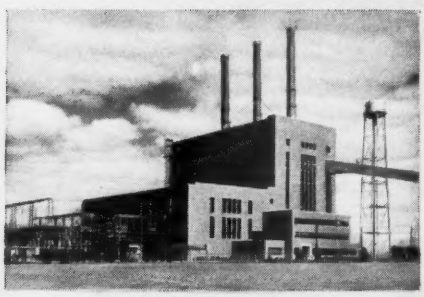

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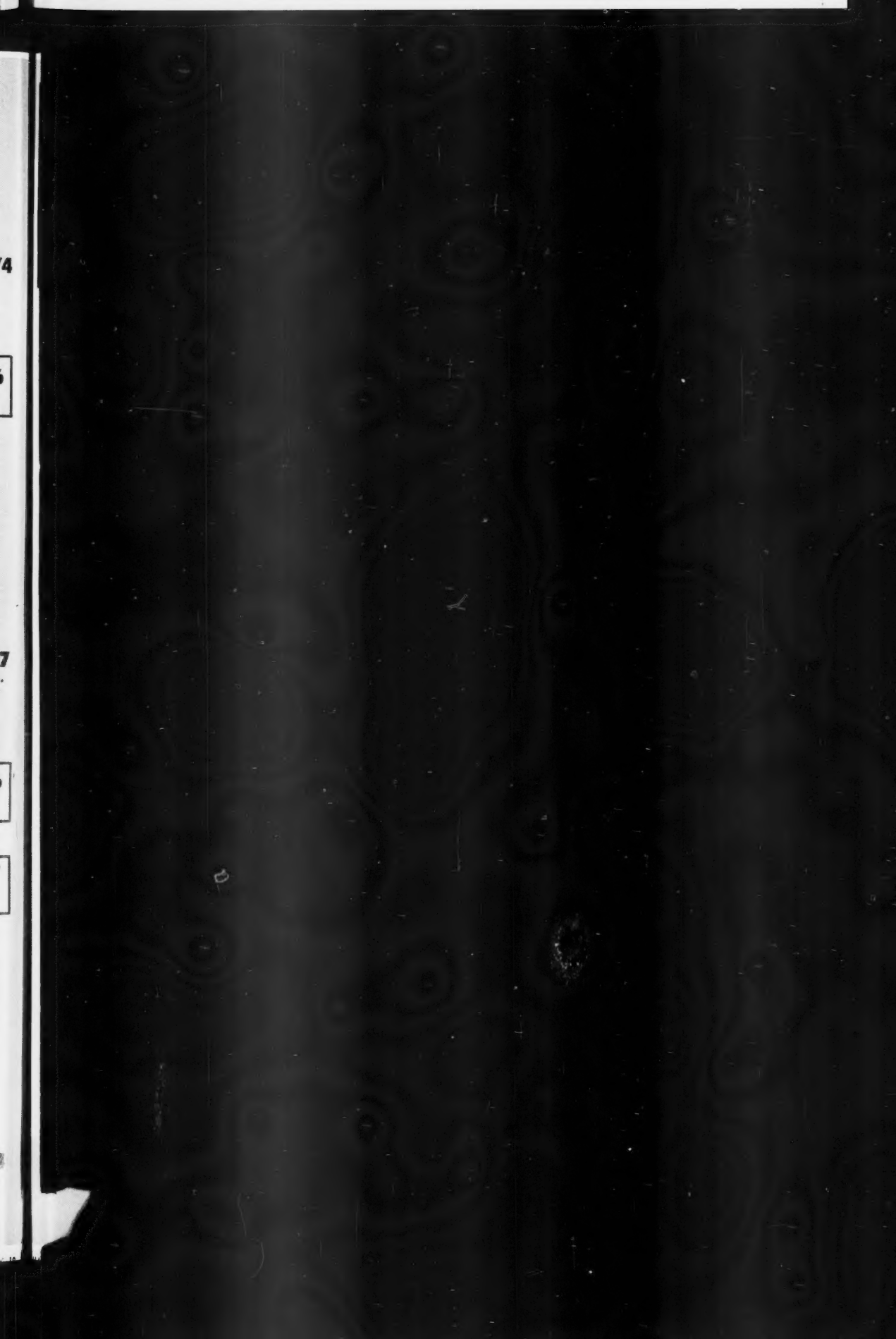

10 BEST ANNUAL HEAT RATES

reflect INCREASING EFFICIENCY in power generation

Annual plant net heat rates of the ten most efficient central stations in the United States in 1954 — as reported by the Federal Power Commission — are led by Kanawha's record 9113 Btu per net kwhr. They are strong vindication of the foresighted utilization of major engineering advances which are taking this nation so far and so fast along the road of power generation progress. And the development of these advances has been possible only through the efforts of the electric companies and their primary suppliers working cooperatively to provide more electricity more efficiently.

In most of these leading stations, B&W Boilers designed with the most advanced features are contributing substantially toward achieving the remarkable plant efficiency levels reported. For example, at Kanawha the B&W vertically-fired Radiant Boiler units utilize:

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To hold building volume to the minimum while achieving required furnace cooling surface.

Just behind the ten leaders are more plants — many with B&W Units — producing abundant, economical power in all parts of the country.

Welcoming its responsibilities as a major supplier, B&W continues to apply the knowledge derived from almost a century of boiler engineering, design and fabrication experience. And to help foresee the needs of the future, the practical results of an extensive B&W program of research and development are continuously being enlisted in the efforts to achieve still higher levels of steam-electric generating efficiency.

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Pages with the Editors

WE may live in an atomic age of bewildering development, but when we turn to the common garden variety of political life most of us can recognize familiar enough tactics. And so it is with the still New Year, which also happens to be a presidential election year.

THE setting may be new, the labels may be different, even the faces have changed to some extent. But the old techniques and artifices of getting elected and luring votes have not changed much despite the spectacular discoveries in the fields of nuclear science, jet and missile aerodynamics, and all the other up-to-the-minute marvels of the latter part of the twentieth century.

G. F. HUDSON, in the British monthly *The Twentieth Century,* made a somewhat similar observation about political life in England. He pointed out that our world of electronics, supersonic aircraft, television, and hydrogen bombs is something quite outside the experience of mankind, not only in ancient and medieval times, but even when Queen Victoria died, which many now living can recall. But the politicians and officials of 1956 seem to behave in much the same way as they did in Nineveh and Tyre.

HUDSON says "the Tell-el-Amarna Tablets disclose an international diplomacy very similar to that of the twentieth century, and the essential relations of human beings as portrayed by Homer are those with which we are familiar in our own everyday life." It is for such practical reasons that we might be well advised to be cautious about jumping to conclusions, even with respect to the new-found magic of nuclear developments. Magic it certainly is and well worth all the concentrated attention of our best scientific minds.

JOHN P. SAYLOR

BUT when nuclear energy passes from the experimental plant into the field of commercial competition, a corresponding change takes place in the problem of application. It becomes an economic problem. And it may well be found to conform to well-known, if not old-fashioned, patterns of politico-economic operation.

A HOST of questions are raised by the advent of nuclear energy in the field of competitive fuels. At what point does it become truly competitive? To what extent is government subsidy an assurance of fuel supply? At what point does government supply of atomic fuel and its purchase of commercial by-products and disposition of residue become justifiable economic operations and not subsidy? What are we going to do about remaining competitive fuels—oil, coal, gas? Should we throw conservation out the window and exploit such reserves as quickly as possible before they are outmoded? Or should we guard them or hoard them or simply let them languish as profitable enterprises because of the encroachment of subsidized nuclear developments?

WHILE it is perfectly true, as the old song would have it, "all the world is waiting for the sunshine," the sun's energy bottled up in nuclear energy development also has its risks and pitfalls. It goes without saying that the peaceful use of atomic energy is an achievement devoutly to be wished at the earliest possible date. But at

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the same time there must be no undue or unnecessary subsidy which might otherwise occur if expenses are concealed and other disadvantages suppressed. In this moving plea for honesty as the best policy in going ahead with nuclear power development, REPRESENTATIVE JOHN P. SAYLOR (Republican, Pennsylvania), in the opening article in this issue, warns against expecting too much and too soon in the way of atomic power. It could be just as disastrous as too little and too late —if the American taxpayer has to pay the bill for a pig in a poke.

REPRESENTATIVE SAYLOR was born in Somerset county, Pennsylvania, and attended the Johnstown public schools, Mercersburg Academy, Franklin and Marshall College (AB, '29), and Dickinson Law School (LLB, '33). He has served as city solicitor of Johnstown and has also practiced law in that community, which he now represents as a Republican member of Congress. After service with the Navy in World War II, he was first elected Representative at a special election in 1949 and re-elected to the last three consecutive Congresses.

* * * *

THE article entitled "Utility Public Relations Practices," beginning on page 80, by DAN E. KARN, president of Consumers Power Company, is a valuable discussion of up-to-date public relations practices of a wide-awake utility organization. Public relations nowadays embraces a wide horizon. It includes the general public as distinguished from the consuming public. It must emphasize public service treatment of the farm and suburban consumers, as well as the urban, domestic, and industrial consumers. It must utilize the good services of the employee and pay special attention to local and community contacts. Another segment of the public frequently overlooked in the active cultivation of public relations is the investing public. This author is the chief executive of a company with over 70,000 shareholders, of whom half live in the service area in the double rôle of electric consumers as well as stockholders.

DAN E. KARN

MR. KARN was born in North Peru, Indiana, in 1890 and graduated as a mechanical engineer from Purdue (BS, '15). He became associated with Consumers Power Company that same year and by successive promotions became president in 1951.

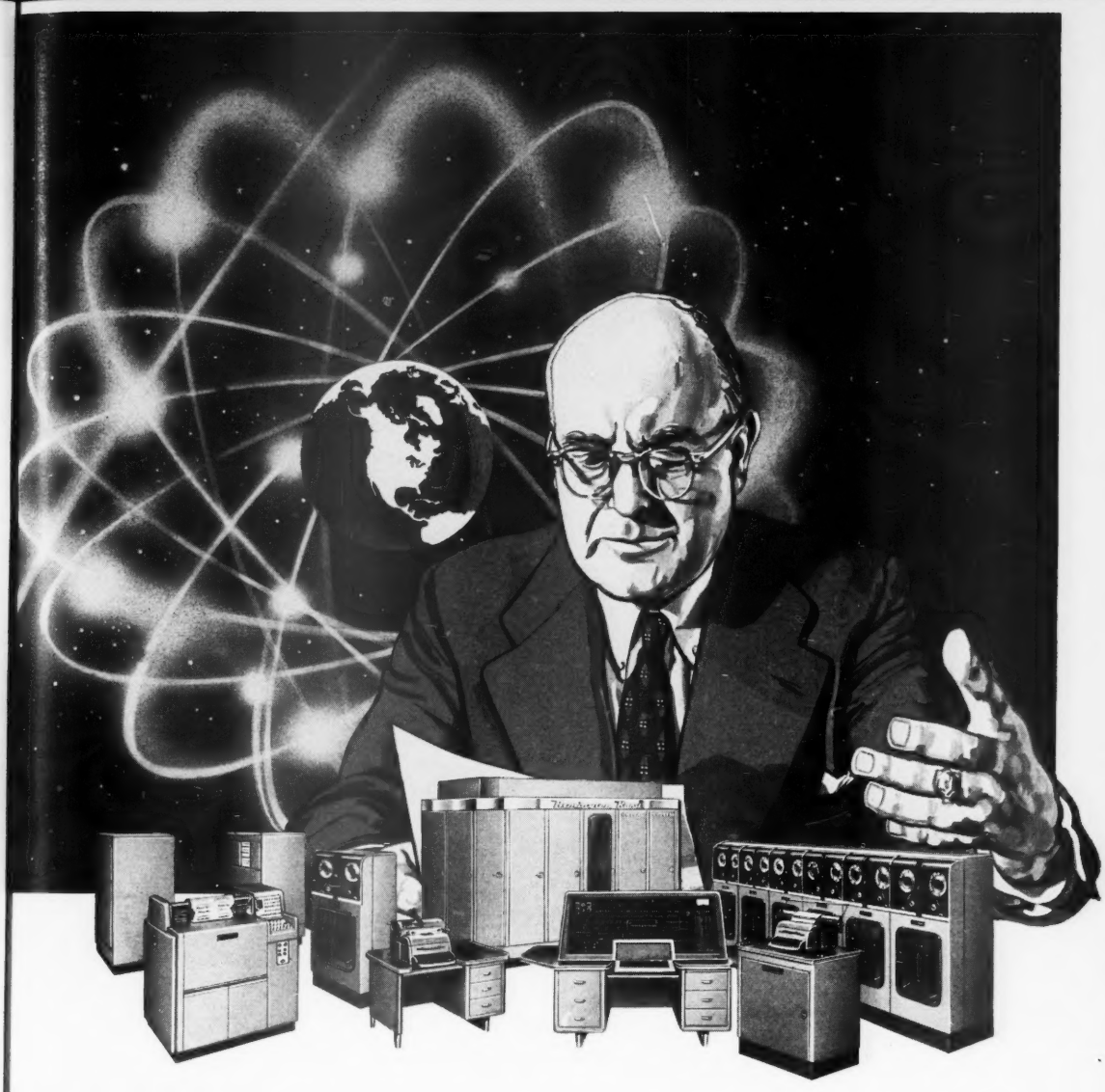
* * * *

THE recent pre-Christmas distribution of a half-billion dollars by the Ford Foundation to over 4,000 colleges and hospitals has been hailed in many quarters as capitalistic private enterprise at its best. Here is an industry engaged in aggressive competition, selling a product at a profit from which such vast sums can be plowed back into socially desirable objectives for the benefit of the community. All this, without sacrificing production or profit.

BUT actually industrial aid to colleges is for the benefit of the enterprise system. It is a seeding operation which will produce the industrial leaders of tomorrow, as well as improve the lot of the customers of today at the community level. In this issue, beginning on page 88, JAMES H. COLLINS, California author of business articles, gives us a fresh look at the basis for corporate contributions towards educational projects.

THE next number of this magazine will be out February 2nd.

The Editors



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Coming IN THE NEXT ISSUE

(February 2, 1956, issue)

★

BOTTLED GAS—ADVANCE GUARD OF UTILITY SERVICE

Efforts have been made to develop a unified and more effective promotion of the sale of gas and gas-consuming appliances. One of these patterns for developing all-gas unity is described by the president of the Liquefied Petroleum Gas Association, C. J. McAllister. Mr. McAllister is president of his own company, The Parlett Gas Company, with headquarters in southern Maryland, at Waldorf. Competitive LP-gas distributors and regulated, franchised gas-distributing utilities can co-operate to hold the new suburbanite for the gas industry. The LP-gas promotion program attempts to hold the gas-oriented consumer until or after gas mains radiate out from urban centers, or branch out from natural gas pipelines. There is no change in the legal status of either supplier. The fringe customer's account may shift to the regular utility supplier. Or it may be retained by the LP supplier that shows its ability to keep the gas flowing to the customer's home. A small conversion job puts most appliances in readiness for hooking onto either the LP or central main natural gas lines.

THE REPEAL OF MAINE'S POWER EMBARGO

During the current controversy in Congress over natural gas legislation, we hear repeated warnings that gas producers and gas-producing states may put an embargo on exporting gas. The theory of this is that the production industry, as well as the state, may find it more advantageous to keep the natural resource for home consumption, rather than have it depleted by pipelines running out of the state under regulatory conditions which would not make such operations sufficiently profitable or compensatory. It so happens that Maine, many years ago, actually adopted a similar policy with respect to the state's water power. The embargo law was designed to keep hydro power for home consumption. Recently, this law was repealed after many years. Why? Dr. Lincoln Smith gives us an interesting account of the background of this experiment and the reasons for its apparent failure.

PUBLIC RELATIONS START AT HOME

There have been published a number of articles about public relations programs from the standpoint of business-managed public utilities. By way of variety, here is an article on the same subject from an official of one of our leading and more successful municipally owned public utilities. He is E. A. Combatalade, director of public relations of the Sacramento Municipal Utility District. Readers will find that the job of keeping the utility customer happy and the general public friendly with utility organization, is just as important to the publicly owned and operated system as to the commercial utility organization. Moreover, it is just as difficult, just as never ending a responsibility, and has many of the same characteristics as to technique and trouble diagnosis. This article stresses the importance of the utility official starting out in his basic approach to the public relations concept from himself. If everyone connected with utilities considered himself as such a starting point, the public relations program as a whole would be much more easily accomplished.

★

Also . . . ***Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.***

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Secretary of Commerce.

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L. F. MCCOLLUM
President, Continental Oil Company.

"If the sun's rays are ever successfully harnessed, the oil industry will be in there selling the best brands of sunshine on the market."

WILLIAM W. WHITEHOUSE
President, Albion College.

"There is a great kinship between private colleges and private enterprise. If private enterprise is weakened, private colleges will be liquidated."

EARL WARREN
Chief Justice of the United States.

"Must a nation that is now the strongest in the world demand, for its own further strength and security, a sacrifice by its own citizens of their ancient liberties?"

EUGENE M. GRABBE
Computer systems division, Ramo-Wooldridge Corporation.

"Looking into the future we see a period of change in which business will drastically revamp its methods to effectively use the electronic tools which are now available."

EDITORIAL STATEMENT
Los Angeles Times.

"Every kilowatt of electricity produced by the TVA, in the past, in the present, and in the future was, is, and will be a burden on every taxpayer in the United States. The bookkeeping that makes the TVA look as if it is paying its way would jail a citizen who applied the system to a private enterprise."

CLIFFORD F. HOOD
President, United States Steel Corporation.

"What we achieve in the years ahead will depend to a large extent upon how successful we are in keeping the rate of capital accumulation in balance with the rate of public consumption of goods and services. Yet there are those who make the taxation of business and industry a political ladder upon which they climb step by step."

DWIGHT D. EISENHOWER
President of the United States.

"Above all, conscious of the towering achievements manifest in the republic's history under the Constitution, assured that no human problem is beyond solution given the will, the perseverance, and the strength—each of us can help arouse in America a renewed and flaming dedication to justice and liberty, prosperity, and peace among men."

CRAIG HOSMER
U. S. Representative from California.

"Westerners should realize that eastern Congressmen do not like the idea of imposing additional tax loads on their districts for new reclamation projects, especially when the warehouses of the nation are bulging with surpluses of food and fiber which cannot be disposed of and which will continue to burden the taxpayers in the foreseeable future."

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Ask your nearest S&C sales representative for information.

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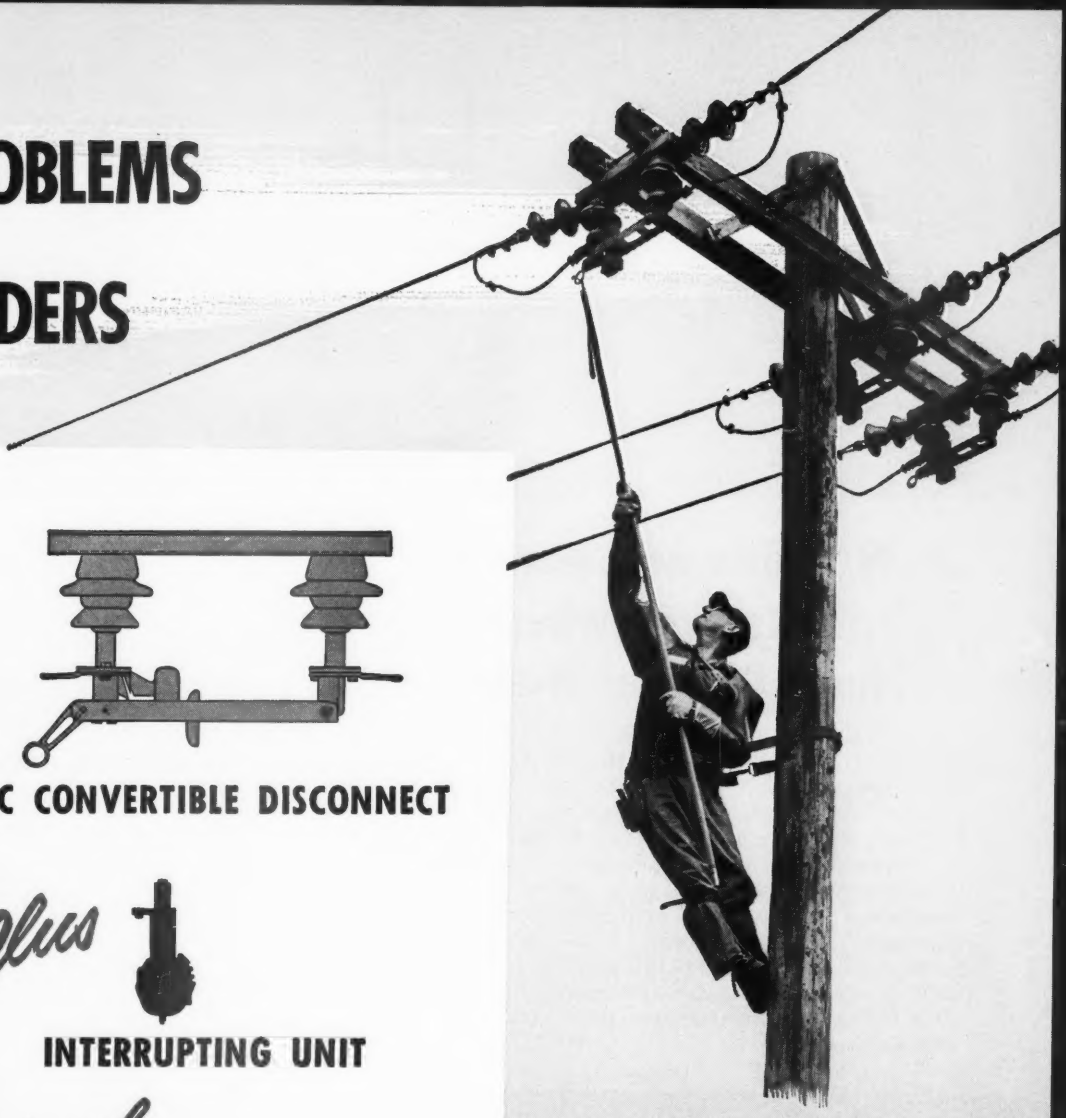

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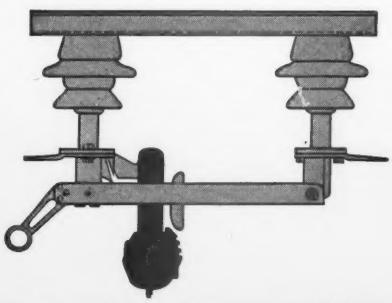

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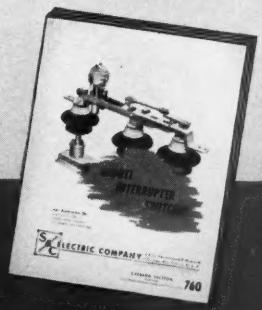
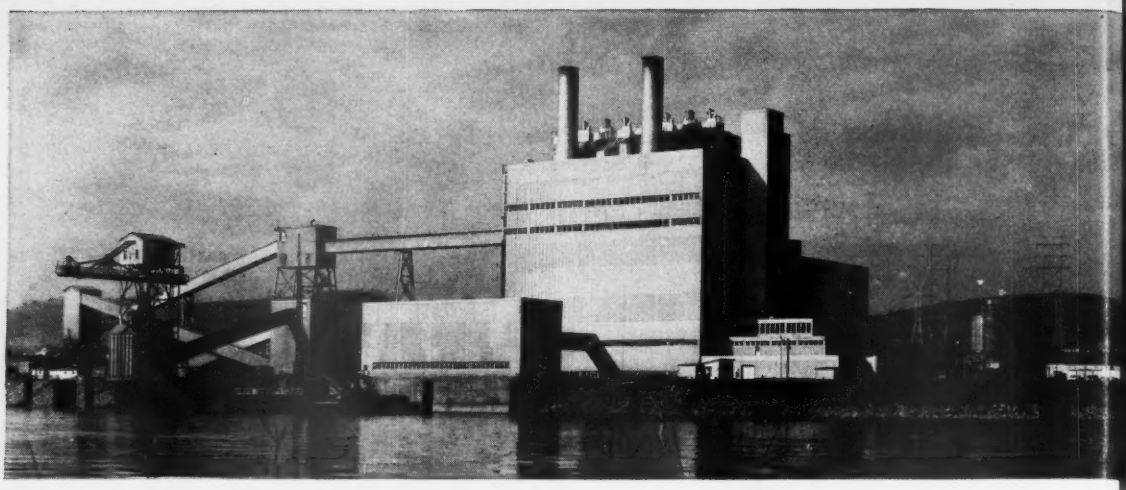


Catalog Section 760 tells in detail how the S&C Load Interrupter improves operating practices and saves money.



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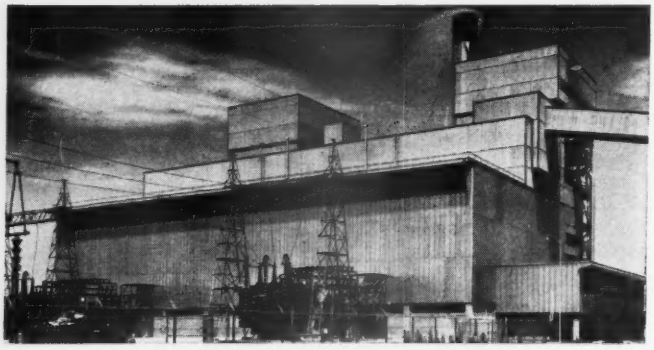

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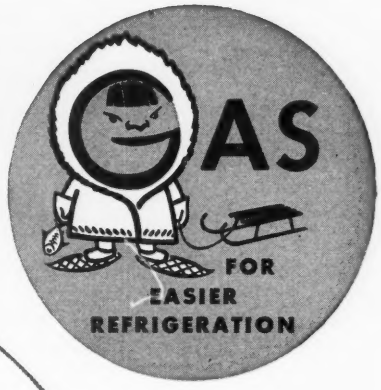

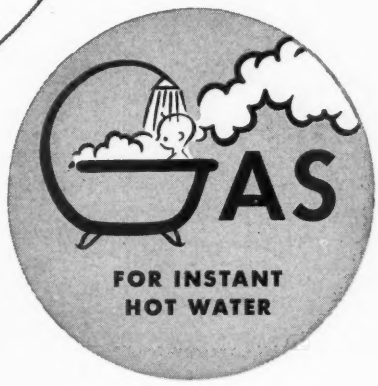

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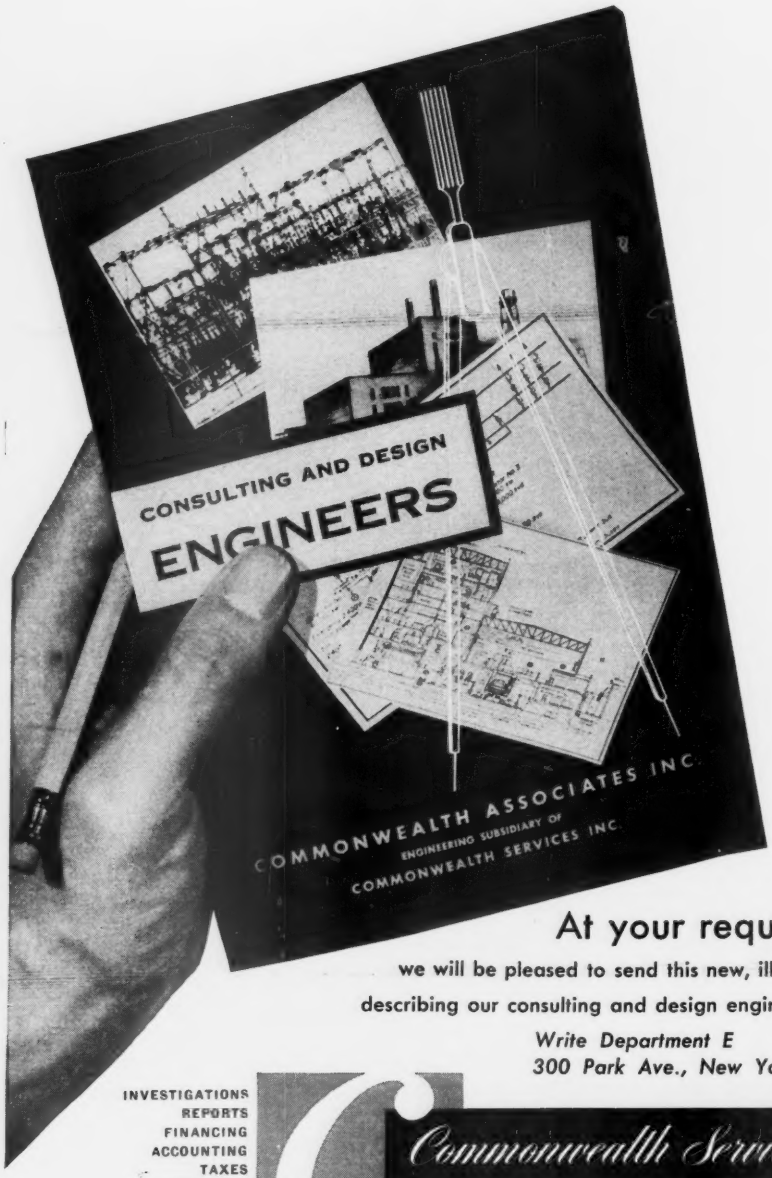

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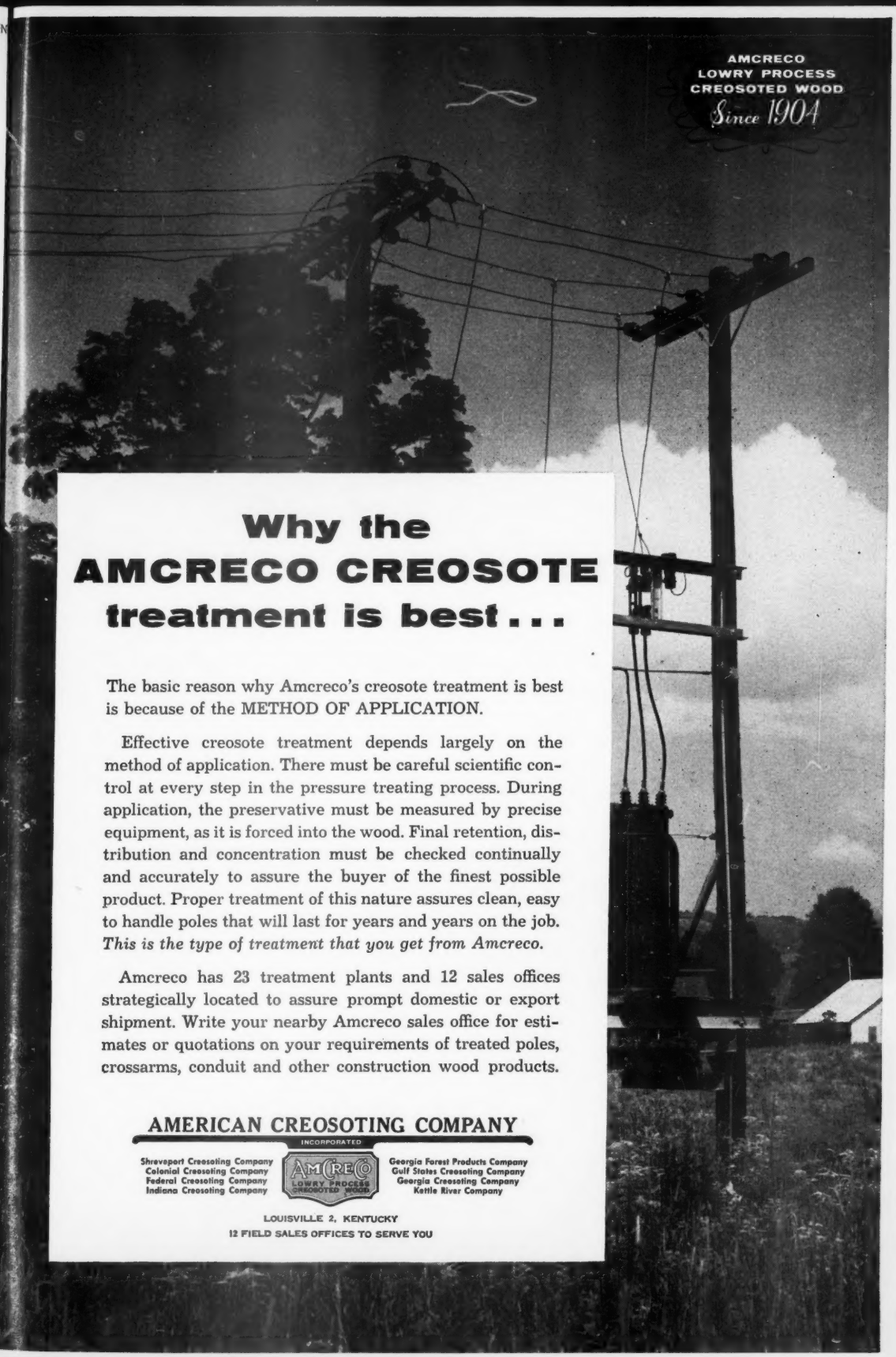

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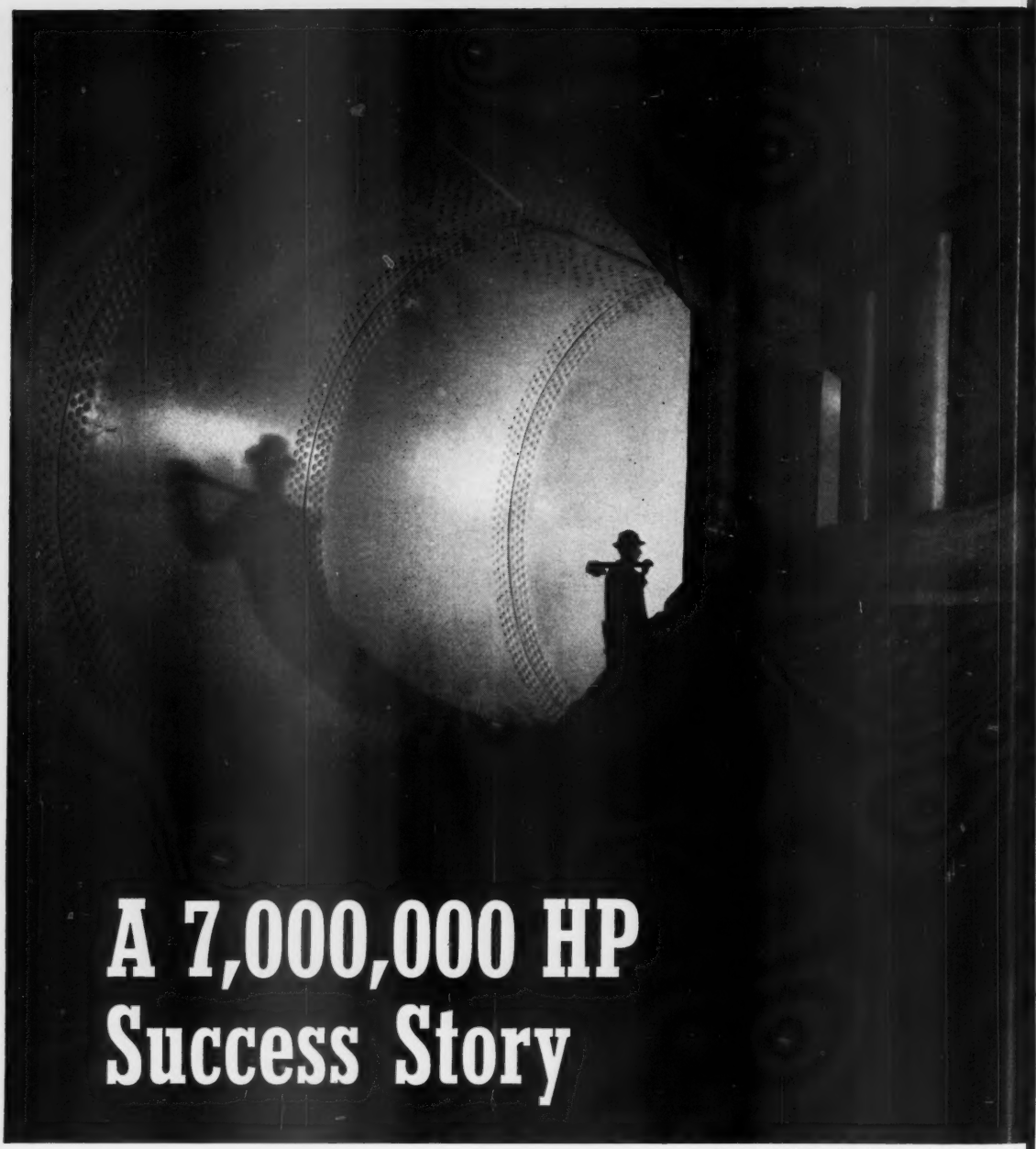

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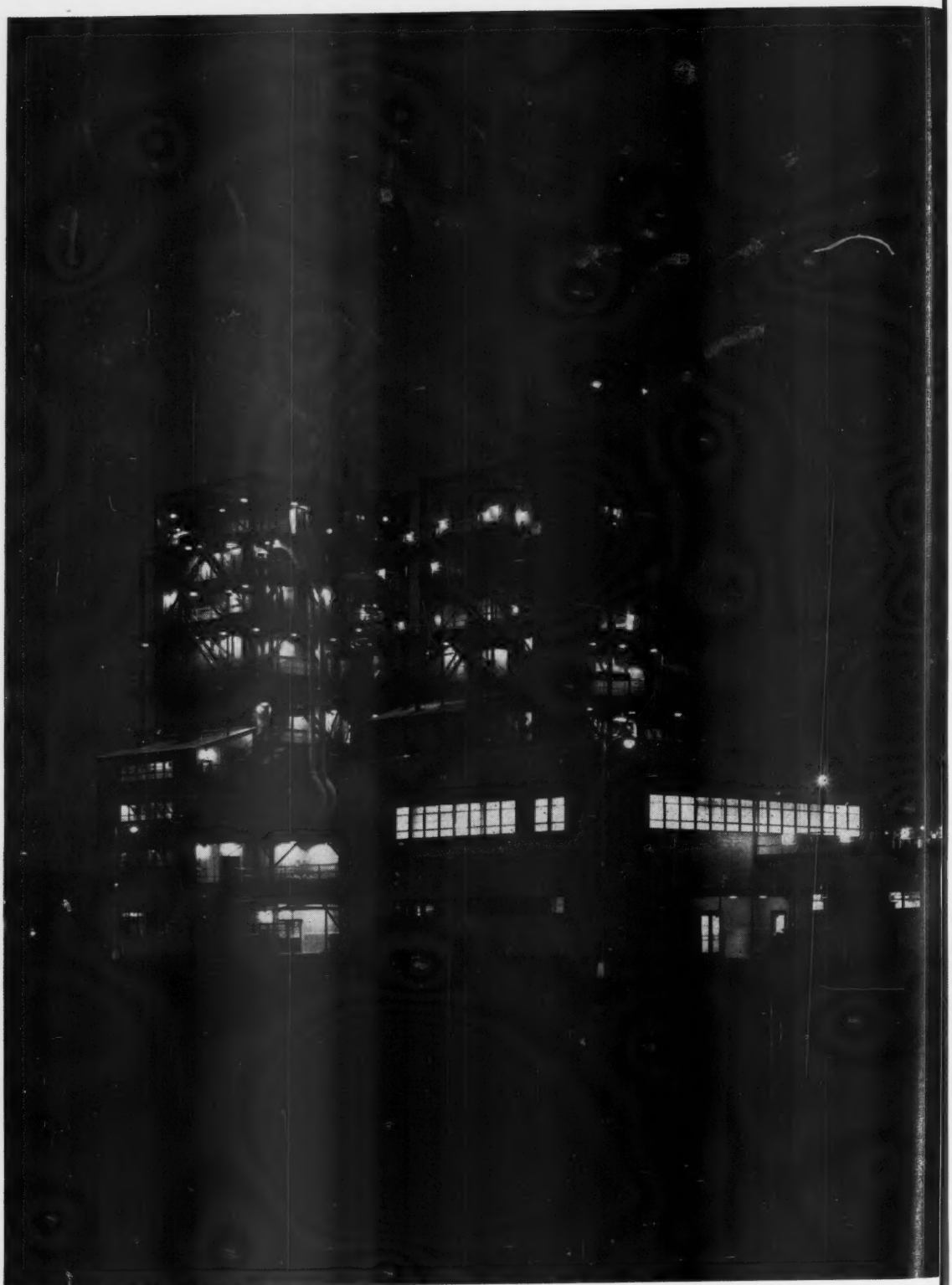
JANUARY-FEBRUARY

Thursday—19 *National Housewares and Home Appliance Manufacturers exhibits begin, Chicago, Ill.*	**Friday—20** *Oklahoma Utilities Association, Accounting Section, begins meeting, Tulsa, Okla.*	**Saturday—21** *Industrial Electrification Council will hold national industrial electric heating conference, Cincinnati, Ohio. Feb. 6-10.* ***Advance notice.***	**Sunday—22** *National Association of Home Builders begins convention and exposition, Chicago, Ill.*
Monday—23 *National Rural Electric Co-operative Association begins annual meeting, St. Louis, Mo.*	**Tuesday—24** *National Conference on Water Resources Policy begins, St. Louis, Mo.*	**Wednesday—25** *American Society of Heating and Air Conditioning Engineers ends 3-day meeting, Cincinnati, Ohio.*	**Thursday—26** *Electrical Equipment Representatives Association begins annual meeting, Chicago, Ill.*
Friday—27 *American Management Association ends 4-day general management conference, San Francisco, Cal.*	**Saturday—28** *National Adequate Wiring Bureau will hold annual conference, Chicago, Ill. Feb. 23, 24.* ***Advance notice.***	**Sunday—29** *Associated Equipment Distributors begins annual meeting, Chicago, Ill.*	**Monday—30** *American Institute of Electrical Engineers begins winter general meeting, New York, N. Y.*
Tuesday—31 *Edison Electric Institute-American Gas Association begin joint plant accounting and property records conference, Pittsburgh, Pa.*	**FEBRUARY** **Wednesday—1** *Natural Gasoline Association of America will hold Permian basin regional meeting, Odessa, Tex. Feb. 24.* ***Advance notice.***	**Thursday—2** *Pennsylvania Electric Association, Transmission and Distribution Committee, begins meeting, Philadelphia, Pa.*	**Friday—3** *Missouri Valley Electric Association ends 2-day industrial and commercial sales conference, Kansas City, Mo.*



Courtesy, Kansas Gas & Electric Company

Night Scene at the Murray Gill Station

Public Utilities
FORTNIGHTLY

VOL. 57, NO. 2 JANUARY 19, 1956

The Basic Danger in the "A" Power Program

This author warns against expecting too much and too soon in the way of atomic power. It could be just as disastrous as too little and too late—if the American taxpayer has to pay the bill for a pig in a poke.

BY THE HONORABLE JOHN P. SAYLOR*
UNITED STATES REPRESENTATIVE FROM PENNSYLVANIA

FOR an industry traditionally disdainful of government supports and subsidies, the electric utilities today appear to be treading on dangerous right of way. The perilous path originates at the disbursing office of the Atomic Energy Commission and moves along the course carefully designed by advocates of public power.

Of a certainty, the Atomic Energy Commission—in its headlong drive to set up the atom as a producer of electricity—has made it difficult for private companies to refuse its generous subventions; perhaps, however, the time has come for beneficiaries in the utility field to make it distinctly clear that further grants—whether in the form of finished reactors, guaranties, or write-offs—are unwanted, unwelcome, and unacceptable.

The desirability of encouraging research and development leading to the production of electricity at reasonable costs through the medium of fissionable mate-

*For additional personal note, see "Pages with the Editors."

rials is not in question. There is definitely a place for the atom as an added fuel, particularly in areas where conventional fuels are not readily available. Development of economically feasible nuclear power is necessary to provide power for underdeveloped areas of the world, to assist nations which have power shortages, and to protect the future of the United States in the power field. The atom should be put to work in whatever peacetime rôles it is capable of assuming in our competitive economy, but not at the risk of enabling the federal government to encroach further into the realm of private business.

HOUSE-TO-HOUSE salesmen often use gifts as a guise for getting a foot in the door. The government also employs this technique most effectively. It entered the electric power business on a broad scale through a backdoor entrance by using agricultural development in the Tennessee valley as a part of the opening wedge. By the same token, bureaucracy's continued investments in the power-by-atom program might give the government a foothold on private property that would ultimately bring a demand for full title. Meanwhile the A program may be placing all supporters of the free enterprise system in an embarrassing position, for the so-called "participating projects" are creating a made-to-order and more-than-valid issue for public power protagonists.

The recent history of AEC's participation in the development of atomic energy for commercial purposes would imply that (1) the federal treasury has such an abundance of funds as to preclude the necessity for careful and economic expenditures, and (2) the welfare of the nation depends upon the ability of the government and/or the utilities to generate power through the use of fissionable material.

The fallacy of the first premise is evident to everyone save possibly those government officials behind the go-for-broke program. Assumption No. 2 has been given such widespread publication that the principal arguments of the program's promoters need to be exposed if the AEC spending spree is to be effectively restrained.

THE obvious strategy of the program has been to attempt to convince the general public that diminishing resources of conventional fuels make it necessary for the rapid development of electric generating plants powered by the atom. Voluminous statistical reports have been prepared in whatever way is deemed necessary to strengthen this impression. Few have any basis in fact, and all such allegations can automatically be refuted by a reference to authentic tables on coal reserves.

Oil and natural gas reserves are, undeniably, being depleted at an increasing rate and eventually will be exhausted. Natural gas is admittedly a short-term fuel. The necessity for conserving it has prompted the Federal Power Commission, on occasion, to refuse applications for the use of natural gas under industrial boilers in areas where coal is available.

The end of our oil reserves, on the other hand, is not in sight at the present time, although it is highly possible that the country will begin to feel a pinch before the end of the century. When this scarcity develops, America's fuel industries will be prepared for it. Atomic energy cannot re-

place the higher uses of petroleum, but synthetic fuel plants can provide both gas and oil when they are no longer available in nature's storehouse. The raw material to be used in the production of synthetic fuels will be oil shale or coal—both of which occur in generous quantities within America's soil.

ALL indications point to coal's carrying a progressively increasing portion of the energy load in the years ahead. The continued upturn in the use of electrical and mechanical energy will spiral demand for coal from the present 400,000,000 to 500,000,000 tons per annum to the billion-ton mark before the year 2000. Even at this rate of production, however, there is enough coal within the borders of the United States to last for more than a thousand years.

Specifically, recoverable coal reserves are in excess of 1.2 trillion tons. Pennsylvania, which has produced about one-third of all the coal used in this country since 1850, still contains some 30 billion tons of mineable deposits. These estimates are based on studies of the U. S. Geological Survey, an agency which apparently has not been consulted by the AEC officials who have set out to portray coal as a short-life fuel.

THE other misconception being publicized in the all-out campaign to continue using taxpayers' money in attempts to expedite creation of an atom-powered electric utility industry is being developed around the cost factor. In the past year there have been numerous news stories based on promises by AEC spokesmen that the atom will eventually generate "cheap" electric power. Presumably, this objective will be reached if a kilowatt-hour of electricity can be produced in a range somewhere between 4 and 7 mills.

To the average reader, that statement may sound most attractive. The fact is, however, that conventional fuels have long been producing electricity at a cost of less than 4 mills per kilowatt-hour. Modern steam plants within close proximity of coal mines are producing 3-mill electricity at the present time. Even in remote areas, where freight rates boost the delivered cost of coal to twice the cost at the mine, electricity is generated for less than 7 mills per kilowatt-hour.

❦

¶ "FOR *an industry traditionally disdainful of government supports and subsidies, the electric utilities today appear to be treading on dangerous right of way. The perilous path originates at the disbursing office of the Atomic Energy Commission and moves along the course carefully designed by advocates of public power. Of a certainty, the Atomic Energy Commission—in its headlong drive to set up the atom as a producer of electricity—has made it difficult for private companies to refuse its generous subventions; perhaps, however, the time has come for beneficiaries in the utility field to make it distinctly clear that further grants . . . are unwanted, unwelcome, and unacceptable.*"

The government's failure to disseminate actual cost information in regard to the peacetime nuclear program makes it almost impossible to determine how many billions of dollars will have to be turned over to the AEC before the atom will produce electric power at a reasonable cost. When construction began on the atomic power plant at Shippingport, Pennsylvania, in September, 1954, the AEC—which is building the reactor—was extremely vague about the cost factor. Finally, fifteen months and a great many millions of dollars later, a commission spokesman was cornered at a press conference and admitted that electricity from the Shippingport plant is expected to cost 52 mills per kilowatt-hour—at least ten times the cost of electric power generated with conventional fuels.

THE AEC's propensity for keeping expenses in the darkroom while the artist's conception of nuclear power plants is projected to the public in glowing terms could eventually strike a damaging blow at the private utility industry. Sooner or later the public power sodality will reveal figures disclosing the total amount invested by the AEC in developing atomic electricity, then ask this question:

> Since the federal government has contributed such an enormous sum toward making nuclear power stations possible, is there any reason why the taxpayer should permit public utilities to profit from this undertaking?

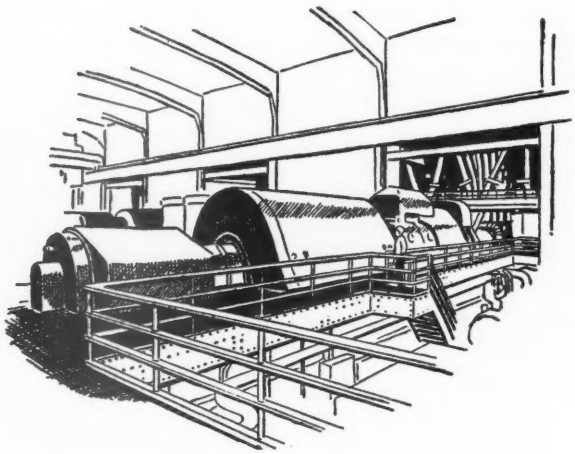
To obviate such a possibility, the general public should demand dissemination of actual cost information except where publication would be inimical to the national security.

THE assumption that nuclear power from presently contemplated reactors may eventually become competitive with electricity from conventional plants disregards the progress in coal utilization. In other words, the nuclear power planners are assuming that atomic-generated electricity will challenge coal pricewise if capital and operating costs of nuclear reactors are reduced as hoped for and—meanwhile—coal technology stands still.

In 1920 it required an average of three pounds of coal to produce one kilowatt-hour of electricity. By 1930 the figure was down to 1.60; in 1940 it was 1.34 and in 1950 it was 1.19. Early in 1955 the average dropped below one pound of coal per kilowatt-hour. Some of the modern plants are far below that average. These figures, unlike those pertaining to power costs in atomic electric plants, are not hypothetical. They are based on established records and are in the files of the Federal Power Commission.

In spite of continuing progress, the present utilization efficiency of coal in the steam plant is only about 38 per cent. Obviously, there is still a great deal of room for progress. It is not inconceivable, if research under way bears fruit, that when and if nuclear power reaches the point where it can be producing 7-mill electricity, the efficiency of coal utilization will have doubled over its present rate. Philip Sporn, president of the American Gas & Electric Company, explains it this way:

> It needs to be kept in mind, too, in judging whether and to what extent nuclear plants will be built in the future in place of new conventional plants, that the nuclear development will always be competing with a constantly improved



Socialized Power via Atom Plants?

"FEDERAL encroachment in the power-making business has already gone entirely too far. Neither the general public nor the electric utility companies can afford to permit the government to proceed with some of its elaborate plans for 'participation' in the atomic energy projects that belong in the private industry classification. By allowing the government to come into the tent so long as it has the price of admission, electric utilities might learn too late that they have made it possible for the bureaucrats to take over the center ring."

—that is to say, more efficient—conventional alternative.

ANOTHER factor which the backers of this new application of atomic power find convenient to withhold from publication is the relative cost of fuels in the overall operating budget of a public utility system. It is therefore not generally realized that only 16 per cent of the total cost involved in generating power and bringing it to the consumers is chargeable to fuels. Thus, even if it were possible to find a way to generate electricity through a self-perpetuating fuel that could be obtained absolutely free, it would still be impossible to reduce a $6 electric bill by more than $1.

Under the circumstances, it would appear that U. S. consumers are already receiving inexpensive electricty and that, since the promised cheap power from the atom is still confined to the province of theory, there is no justification for the vast expenditures being made under the auspices of the AEC research on the commercial application of nuclear materials.

There is no denying that—if the government is going to subsidize construction

of reactors and other necessary facilities, if the government is going to undertake to insure property and personnel against damage that could be inflicted in the event of an accident in an atomic plant, if the government is going to underwrite commercial operations against losses incurred in developmental programs, if the government is going to supply atomic fuel at less than the full cost thereof, if the government is going to subsidize atomic fuel processing and disposal of atomic waste—then there is a basis for the assertion that the atom may soon become a principal source of electric power. In all likelihood, electricity at TVA rates can be made available to consumers in various areas of the country if the federal government is willing to pour sufficient funds into the atomic energy program.

PUBLIC power groups want to make federal funds available to whatever extent is necessary to produce their brand of "cheap" electricity. They are urging more AEC help to private firms for the construction of atom power reactors. They want research and development aid on more liberal terms, and they want the AEC to bear the cost of fuel elements for small reactors. And while the nation's private insurance industry is attempting to determine the most feasible methods of providing indemnity to cover damages that would result from an accident in an atomic electric plant, the public power enthusiasts would have the government assume the insurance burden regardless of costs involved. What we who oppose unnecessary expansion of the public power program must realize is that each such subsidy provides bureaucratic forces with a further opportunity to claim a vested interest in the electric power industry; to believe otherwise is to underestimate the intent of public power supporters.

Those who would socialize the whole power industry find the atom's potential in the generation of electricity a very convenient steppingstone, particularly since the government fostered basic research and has exercised strict control over succeeding developments. The new Atomic Energy Law, enacted in 1954, tended to lessen the government's monopolistic grasp on the atom, but it retained federal control over private development in the nuclear fission field. The revised law has been described thusly by Dr. Robert E. Wilson, chairman of the board of Standard Oil Company (Indiana), himself a renowned engineer:

> If anyone claims that the new Atomic Energy Act turns over to private industry a bonanza in the form of already solved technical and economic problems and an assured profit, either he does not know the facts or he is an arrant demagogue. Any private investment in commercial atomic power generation in the near future will have to be inspired more by public service motives than by any reasonable expectation of substantial profit.

ATOMIC energy is novel, and its advertised possibilities in industrial application have wide public appeal. It arouses the curiosity, heightens the imagination. It is another source of heat with a new and special technology, yet on close examination we discover that it has no immediate advantages which should impel us to expedite its advent into the power field by investing billions of hard-to-get tax dollars.

THE BASIC DANGER IN THE "A" POWER PROGRAM

Practical businessmen and industrialists will welcome the opportunity to put this new source of power to work. Yet they foresee no immediate need for it. The electric utility industry is proceeding with an unprecedented expansion program in steam electric stations. Some of the companies, while not discounting the theory that in a decade or so hence it may be profitable to invest in full-scale atomic energy plants in certain areas of the country, are erecting steam-generating stations in coal-producing regions at greater distances from consuming communities than has heretofore been considered economically feasible. At the present time 340,000 volts are transmitted by generating stations; utility experts believe that eventually it will be possible to operate 500,000-volt wires, thereby decreasing line losses and permitting transmission over greater distances. Under such circumstances, more and more generating stations would be located at the mine mouth, thus reducing costs and further discouraging the entry of competitive sources of power, except in remote sections of the country.

Left to their own resources and ingenuity, the electric utilities will develop atom plants soon enough. Meanwhile the industry will supply all the power that is required without any help from the federal government. This point was stipulated very succinctly in one sentence of Admiral Ben Moreell's analysis of the Hoover Commission Task Force Report on Water Resources and Power: "Technically and financially there is no present or prospective need for federal power activities." [1]

FEDERAL encroachment in the power-making business has already gone entirely too far. Neither the general public nor the electric utility companies can afford to permit the government to proceed with some of its elaborate plans for "participation" in the atomic energy projects that belong in the private industry classification. By allowing the government to come into the tent so long as it has the price of admission, electric utilities might learn too late that they have made it possible for the bureaucrats to take over the center ring.

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[1] "Unfair Practices in the Disposal of Electric Power," by Admiral Ben Moreell, USN (Ret.), PUBLIC UTILITIES FORTNIGHTLY, November 10, 1955, p. 773.

Solar Harnesses

SCIENTISTS *have discovered "at least five different methods" for harnessing the energy which the sun showers onto the earth at a rate of about 1,000 horsepower an acre. It can be used directly as heat or converted into electricity.*

George R. Harrison, dean of science at Massachusetts Institute of Technology, said recently all of the methods available so far "are so inefficient" that it would not be economically feasible to use solar energy for any purpose except research.

He expressed belief that research will cut costs and improve efficiency of solar energy apparatus to the point where it can compete with conventional heating systems in the sunny regions of the South and Southwest "in the next five to ten years."

Utility Public Relations Practices

Public relations nowadays embraces a wide horizon. It includes the general public as distinguished from the consuming public. It must emphasize public service treatment of the farm and suburban consumers as well as the urban, domestic, and industrial consumers. It must utilize the good services of the employee and pay special attention to local and community contacts. Another segment of the public frequently overlooked in the active cultivation of public relations is the investing public.

By DAN E. KARN*
PRESIDENT, CONSUMERS POWER COMPANY

SOMEONE has said that public relations is the art of treating the public as if they were not your relations.

The truth is that the best way to assure good public relations is to deserve them. Character comes first in a public service company just as it does in an individual. Public relations techniques miss their mark unless the company's basic attitude toward its customers is fair and friendly, as is the case with practically all utility companies with which I am familiar. But a man of fine character and instincts may be unpopular and lonely unless he has learned how to win favorable attention. This is true of a utility company, too.

*For additional personal note, see "Pages with the Editors."

The purpose of these paragraphs is to review certain public relations practices which have given results in the case of Consumers Power Company. They were not originated by us, nor do we claim to be their most accomplished practitioners, but they have helped us.

Widespread Territory

OURS is a rather large electric and natural gas company in a definitely nonmetropolitan area. Sometimes we say it is the largest company serving a territory which includes no metropolitan city, but this may be unfair to Grand Rapids and Flint, each with a population approaching 200,000. Anyway, we supply electric service to 765,000 customers and natural gas

service to 400,000, and the overlapping electric and gas service areas contain a population of about 3,420,000.

THE combined service area embraces 28,500 square miles of urban, farming, and recreational country in 64 Michigan counties. It stretches from the Ohio and Indiana borders to the Straits of Mackinac and from Lake Michigan to Lake Huron. We serve a total of 1,584 cities, villages, and townships, many of which are more than a hundred miles from our general offices in Jackson (a city of 52,000), and some of which are as much as 275 miles distant.

Only 29 of the cities served have populations exceeding 15,000. More than 100,000 of our customers are farmers, and I do mean *farmers,* not just rural customers. On the other hand, thousands of our natural gas customers work in Detroit, a city in which we do not operate, and return at nightfall to one of the "bedroom" towns where we supply service.

Obviously, the job of maintaining proper public relations in this vast and diversified territory is somewhat different than it would be if the great majority of our customers were residents of a single metropolitan area, though perhaps not more difficult. We cannot be good citizens of just one community. Like our friends of Georgia Power, we must (in the words of that company's well-known slogan) be "a good citizen wherever we serve." The responsibility of good citizenship cannot be assumed for the whole operating area by any small group of men in any single city; it must be delegated to many men and women in hundreds of communities. We cannot talk to our customers through the newspapers of any one metropolis; there are some 30 dailies and 350 weekly newspapers in our service area.

Decentralized Operation

OUR plan of handling public relations under these rather unusual but certainly not unique circumstances is twofold:

1. Administrative responsibility is genuinely decentralized.
2. Company officers and general office personnel carry on a regular program of public relations activities throughout the service area.

The territory in which we operate is apportioned among twelve operating divisions with headquarters in Alma, Battle Creek, Bay City, Flint, Grand Rapids, Jackson, Kalamazoo, Lansing, Muskegon, Pontiac, Saginaw, and Traverse City. In his own area, the division manager is Mr. Consumers Power, but he may have several district or local managers under him, each of whom, in his own smaller sphere, is Mr. Consumers Power too.

Of course, the division manager has full charge of everything in his division, within the limits of policies and procedures established by top management in Jackson, but unless he is a good public relations man he is not a good division manager. He has superintendents who, under his direction, handle such matters as accounting and electric or gas distribution, but public relations is his own primary responsibility.

It is the division manager who keeps in touch with governmental officials, represents the company in civic activities, cooperates with newspapers and other communication media, visits with major users of electricity and natural gas, and, in gen-

eral, sees to it that the company does a good job and enjoys the respect of the people it serves. He has an assistant to handle some of the details, but the responsibility rests squarely on himself.

TOP management intrudes no more than necessary. Questions arising in any division are handled in that division, not in the general office. If there is a public statement to be made—outlining the year's construction program in the division, for instance—the division manager makes it. A press release that another company might issue in a single form, quoting a top officer, is often issued in twelve versions, one for each division, quoting the division manager.

So, too, with the district and local managers. They speak for the company within their own areas of responsibility. We think a published statement has greater impact and better acceptance when a large percentage of the customers are acquainted personally with the man who is talking.

Employees Win Friends

THE employee organization is a powerful force in public relations. We have something more than 10,000 employees, or roughly one per 100 customers. Every employee is indoctrinated to understand that in his (or her) dealings with customers, *he* is Consumers Power Company.

For employees whose jobs involve numerous contacts with customers, there are training courses which emphasize courtesy and proper consideration for the other person's viewpoint. Telephone operators, cashiers, complaint clerks, are among those who receive this training. Everyone who drives a Consumers Power Company motor vehicle is taught to drive safely and with courtesy. This pays off in dollars and cents as well as in good public relations. Employees are encouraged to participate in Community Chest campaigns and similar activities. They are recognized for good citizenship, and this contributes to the company's good standing in the community. A number of our people are officers or members of boards of education in their communities. Meeting with other civic-minded citizens on common ground to consider school problems, they arrive at a mutual understanding that makes for good public relations.

CONTINUITY of employment makes utility company men and women especially good citizens. They usually are home owners. They like their occupation, and they plan to remain in town. They want to make it a better town for themselves and their children. Long service also makes

¶ "SOMEONE *has said that public relations is the art of treating the public as if they were not your relations. The truth is that the best way to assure good public relations is to deserve them. Character comes first in a public service company just as it does in an individual. Public relations techniques miss their mark unless the company's basic attitude toward its customers is fair and friendly, as is the case with practically all utility companies . . .*"

them better employees. We try to keep our employees with us for many years by making their jobs attractive and by providing for retirement on pension at age sixty-five or earlier. Long service is recognized through the presentation of service pins at annual service pin dinners attended by wives and husbands as well as the employees themselves.

An employee who likes the company and who has chosen to spend his working years in its service is usually an influence for good public relations. He knows his job and does it well, which pleases the customers. He also "sells" the company to his friends and neighbors. This is especially true if he happens to be a stockholder as well as an employee—as some 25 per cent of Consumers people are. On several occasions during the last five years, we have made it possible for Consumers' employees to buy up to 100 shares of common stock at a favorable price by means of payroll deductions. I know of no better way to promote employee understanding of how a company operates, nor to cause an employee to identify his own interests with those of his employer.

"Enjoy Our Land"

I MENTIONED that the company carries on a number of public relations activities from the general office. Some of these grow out of the characteristics of outstate Michigan.

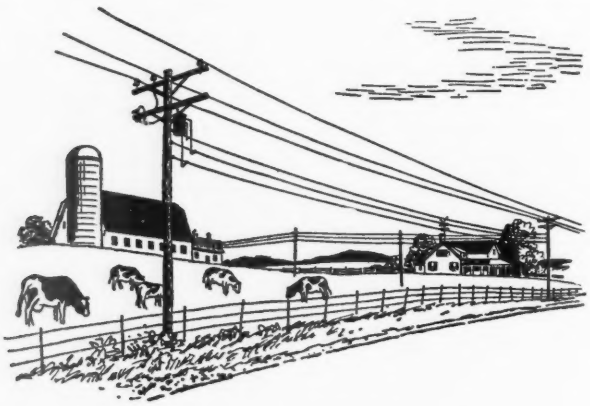
The Michigan "mitten," more formally known as the lower peninsula, is one of America's great recreational areas. Lying between Lake Michigan and Lake Huron, dotted with smaller lakes and traversed by famous trout streams, it attracts millions of tourists every year. Although 90 per cent of the power distributed by Consumers is generated in a few large thermal plants, the company has 38 hydroelectric plants on Michigan rivers. The Au Sable, the Manistee, and the Muskegon are the principal rivers from the power generation viewpoint, and they are also the three most popular fishing rivers in Michigan.

Consumers owns many miles of forest lands along these streams. We must own them in order to maintain satisfactory flowage conditions. If we fenced the land and erected "Keep Off" signs, unfavorable public relations would almost certainly follow. But we don't. In effect, the company says to the public, "Our land is yours to enjoy." Fishermen, hunters, picnickers are allowed to use our river lands almost as if the dams were not there. Restricted areas are found only where considerations of safety or national defense make restriction necessary.

On the beautiful pond above the Foote dam on the Au Sable river, the company has established Old Orchard Park for the use of trailer vacationists. Old Orchard has 80 campsites on 50 forested acres, with facilities for campfire cooking. Toilet accommodations are provided. At the caretaker's lodge and store, staple groceries, ice, and supplies may be purchased, and boats are available for renting. The camp is full throughout the summer season.

Red Bridge Camp on the Manistee river near Tippy dam is similar. Like Old Orchard, it is operated by the company wholly as a public service. Profits derived from boat rentals or sale of merchandise help to compensate the caretaker for his efforts.

SEVERAL choice locations on the rivers have been leased at $1 a year to county



Rewards of Farm Service

"To serve more than 100,000 Michigan farms is a privilege our company values highly. These farms, naturally enough, are spread over a vast area and they include about every kind and size of farm that can be imagined. Extending service to that many farms, a job largely accomplished in the last twenty-five years, involved economic problems that need not be dwelt upon. Then came the development period which still continues and will continue indefinitely. Farm use of electricity had to be built up to the point where both the farmer and the company would receive something approaching a proper return on investment."

governments or sportsmen's clubs for public use.

A number of camp sites along the rivers have been turned over to the state conservation department to be administered for the convenience of fishermen and canoeists. Permits for the operation of boat liveries on company land have been granted where liveries seemed to be needed.

THE company helps keep northern Michigan attractive to tourists and sportsmen by reforesting its river lands and protecting them from forest fires. Reforestation work is carried on every spring and fall.

By the end of 1955 approximately 15,000,000 trees will have been planted by the company on some 16,000 acres. We are also maintaining natural forest cover on about 75,000 additional acres.

SPORTSMEN sometimes pause to wonder what would have happened if the Consumers lands along the Au Sable, the Manistee, and the Muskegon had been acquired in small pieces by many private holders. Their conclusion is that the rivers might have been much less usable by the

public than they are under the Consumers plan of permitting free public access. A situation that might easily have promoted bad public relations actually contributes to *good* public relations.

Working with the Farmer

To serve more than 100,000 Michigan farms is a privilege our company values highly. These farms, naturally enough, are spread over a vast area and they include about every kind and size of farm that can be imagined.

Extending service to that many farms, a job largely accomplished in the last twenty-five years, involved economic problems that need not be dwelt upon. Then came the development period which still continues and will continue indefinitely. Farm use of electricity had to be built up to the point where both the farmer and the company would receive something approaching a proper return on investment. At the same time, good public relations with the farmers had to be established and maintained.

No one could sit in the general office in Jackson, Michigan, and visualize the electrification problems of more than 100,000 farmers. We have a working farmer on our board of directors, which helps, and we have a general farm service supervisor, with an assistant, in the general office.

But we also have 22 farm advisers distributed among our 12 operating divisions.

These men have no equipment to sell. Their job is to keep in touch with the farmers and farm agencies in their own areas and to give advice on electrification matters as requested. They are men who know both farming and electricity, and they have popularized many electrical applications which mean better profits for the farmer and increased load for Consumers Power Company. Working with Michigan State University, county farm agents, 4-H clubs, and other agencies, they have helped Michigan farmers to develop ways of using electric heat in the brooding of chickens and pigs, to drain muck lands with electric pumps, to transfer and grind grain with electric power, and to illuminate the underside of a milk cow with electric lighting built into the floor.

If the agricultural high school or the 4-H club needs a speaker or a motion picture (with machine and operator), the program chairman knows he need only call the nearest Consumers office. If a farmer wants to do something with electricity but cannot quite figure out how to do it, expert counsel is available.

That activities of this sort mean good public relations in the farm areas was illustrated recently when Michigan State University presented an official citation to the company's general farm service supervisor in recognition of his outstanding contributions to Michigan agriculture.

Statewide Viewpoint

Although company operations are decentralized among the twelve divisions, there is no dodging the fact that the company's officers are located in Jackson and not in any other division headquarters cities, several of which are larger than Jackson. Consumers' officers know they must always think in terms of the whole service area and never let their vision be restricted by the boundaries of a single city. To preserve their statewide viewpoint, they travel among the divisions

frequently, and this is true of the directors, also.

Our directors include men from Grand Rapids, Flint, Saginaw, and Kalamazoo, as well as Jackson. Monthly meetings of directors are held. Normally, these are in Jackson, but often they are in Grand Rapids, Flint, Bay City, Muskegon, Pontiac, or somewhere else, and it is customary to have luncheon or dinner with a group of local people for the discussion of business and public relations problems. Often these meetings of the board coincide with an open-house program at a power plant or a new service building. Such occasions offer particularly good opportunities for our directors and officers to keep in tune with the people in the larger communities we serve.

IT probably is unnecessary to add that we hold open house whenever we have a good excuse to do so. Some of our more recent open houses were at the new Flint Service Center, the new Central Division Service Center in Alma, and the new General Meter building in Jackson. Public response to open-house invitations has been more than gratifying. In Flint, for instance, we entertained some 20,000 visitors in a period of a few days, and every person, I think, left our property with a new appreciation of the electric and natural gas service industries.

Another recurring public relations project that has paid rich returns is our annual series of regional stockholder meetings. Consumers is incorporated under the laws of Maine and our annual meeting is held in Portland. This is not a convenient meeting for our Michigan customers to attend. Some years ago our chairman of the board, Justin R. Whiting, instituted the plan of holding regional stockholder meetings in some of the principal cities of the service area immediately after the Portland meeting. Stockholders turned out in large numbers.

Now we hold ten regional stockholder meetings in April of every year—in Battle Creek, Bay City, Flint, Grand Rapids, Jackson, Kalamazoo, Lansing, Muskegon, Saginaw, and either Pontiac or some other location in our southeast division.

CONSUMERS has about 71,500 stockholders, common and preferred, of

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¶ "IN *his own area, the division manager is Mr. Consumers Power, but he may have several district or local managers under him, each of whom, in his own smaller sphere, is Mr. Consumers Power too. . . . It is the division manager who keeps in touch with governmental officials, represents the company in civic activities, co-operates with newspapers and other communication media, visits with major users of electricity and natural gas, and, in general, sees to it that the company does a good job and enjoys the respect of the people it serves. He has an assistant to handle some of the details, but the responsibility rests squarely on himself. Top management intrudes no more than necessary.*"

whom about half live in our service area and thus are customers as well as stockholders. A total of about 4,000 attend the ten regional meetings. This is a fair percentage and it should be remembered that the 4,000 who attended this year are not necessarily the same 4,000 who attended last year.

The important thing, however, is that every stockholder in or near the ten cities has an opportunity to attend. If he passes up the meeting, he still remembers that he received an invitation.

Press coverage of the regional meetings is encouraged, and sometimes the newspaper sends a photographer as well as a reporter. When newspaper readers come across the account of the meeting, they are reminded that Consumers Power Company is no remote abstraction but a Michigan company in which many thousands of Michigan people have invested a portion of their savings.

Area Development

For several years, Consumers has been carrying on a national advertising program emphasizing outstate Michigan's advantages as an industrial location. Other utility companies have similar programs and I shall not go into details about ours. Our industrial site advertisements appear in *Newsweek, U. S. News & World Report,* and various other publications, and the point I want to make is that our customers are pleased when they run across one of these ads. They are proud of Michigan and happy to know that Consumers Power Company is buying space in national publications to tell the people of America about our state. To be sure, the main purpose of our industrial site advertising program is to attract manufacturers, but it pays off in better public relations also.

This is even more true of the work of our industrial development director and his assistants. Much of their work is in small communities, especially resort communities that need a small industry or two to maintain economic stability in the off season.

Even the larger industrial cities are usually pleased to attract a new industry. To the utility company, a new industry means additional business, but if the people know that the utility company helped bring the new industry to town, it also means improved public relations. Industrial development activity by a utility company therefore must take high rank among examples of "enlightened selfishness."

I have mentioned a few of the things that, for us, have produced good public relations results. The list is far from complete. Perhaps it would be impossible to enumerate all the myriad factors that influence a company's public relations for better or for worse. Fortunately, a company that tries sincerely and intelligently to do a good job for its customers, its employees, and its stockholders is likely to enjoy good public relations if the public understands what it is trying to do—and the American people have proved rather discerning in this respect. Good public relations activities help promote such understanding.

Why Colleges Ask Business For Money

First, business takes most of their product—will need more and more. Their costs have zoomed, like everybody's. Endowments do not earn as they did, and anyway are drying up. So, colleges need moderate, regular money, spread over the whole business community.

By JAMES H. COLLINS*

OLD Mother Hubbard, she went to her cupboard to get herself—engineers. But the cupboard was bare.

Once, it had been self-replenishing. Every June, so many young engineers were graduated by the colleges and showed up at employment offices looking for jobs. Business hired as many as it needed. Young engineers, like many other staples in the prewar economy, were produced by its normal working, often putting themselves through college. Business may have heard that the cost of producing a young engineer, to the college, was more than he paid in tuition fees. Well, that was taken care of by the fortunes rich oldsters left to the endowment funds.

But postwar, something began to happen to this arrangement. Population grew and moved about, more engineers were needed, engineering increased in complexity. The June crop of young engineers did not increase in ratio. They did not show up at the hiring offices. Business had to look ahead, determine how many young engineers it would need, and send scouts to the colleges to recruit graduates. Soon, there was competition in recruiting, and the annual crop fell short of requirements.

FOR 1955, industry estimated that 37,000 young engineers would be needed,

*Professional writer, resident in Hollywood, California.

and the graduates numbered only 21,500. Last summer the college scouts for one large utility corporation came back to report to their chief.

"How many?" he asked.

"None at all," was their shamefaced answer.

"What—not one! Where have they all gone?" he demanded. "Why when I left 'Tech' we were a dime a dozen. I must have been born thirty years too soon."

The cupboard is bare, but business peers into it hopefully.

NOT only are the colleges recruited for graduates, but there is a staggering volume of all-year-round advertising for engineers in newspapers, technical journals, and even general magazines. In every industrial center engineers may be thinking of changing jobs.

A count of the "Help Wanted—Men" classified ads in a single Sunday issue of a metropolitan newspaper discloses more than a dozen pages, more than 100 columns, of which 28 columns are for engineers and engineering technicians. Considerable advertising is done by companies in distant cities, which have set up local employment offices to interview applicants.

And the best copy-writing brains appear to be assigned to this billet, the same fellows who write "You too can be beautiful and bake an angel cake." It is not merely jobs that are offered, but careers of the utmost brilliance, at work that is fascinating, stretching far into the future, with ever-rising salaries and increasing promotions. Fringe benefits are listed almost down to coffee breaks, and the companies sketch their histories and achievements.

LET the utility manager who thinks the cupboard bare consider the plight of the executive who has to man such an organization as that of the Los Angeles County Air Pollution Control District. He has more than a hundred jobs for engineers and technicians, to study the kinds, sources, and effects of pollution over hundreds of square miles of territory. If the men he needs could be found, they would not work for the salaries offered. If the salaries were in line with those paid by private business, they would not stand the constant abuse that goes with the job.

If the cupboard is bare today, what of the future of utility companies? The utilities need young engineers today for the great expansion that is coming, because it is they who, twenty or thirty years from now, will have to solve the problems. In the electric power industry alone, as recently pointed out by Harllee Branch, Jr., president of the Edison Electric Institute, there is atomic power to be dealt with, and a doubled generating capacity by 1965.

THAT is the gloomy side of the picture, and there is a bright side in the work now getting under way for the replenishment of this cupboard.

Briefly, the situation is this:

Business needs young engineers.

Young engineers come out of colleges.

Colleges need money, because their costs, like everybody's, have been pulled out of shape by postwar conditions.

The logical source of college money today is business.

So, the colleges are going to business for money on a businesslike and highly educated program.

Colleges need more than money—they

need the teamwork of business executives, and the latter need closer acquaintance with educators and students.

Business needs more than engineers and technologists—it is the liberal arts graduates, and the technological students whose education has been laced with liberal arts, who will develop into management.

For quite some time, the money support of independent colleges has been a "good buy" for business, but only in 1948 was that made into a good sales pitch by a college president, Frank H. Sparks, of Wabash College, Crawfordsville, Indiana, founded in 1832, with about 500 students. Up to then, Wabash had been doing pretty well, with its $3,375,000 endowments, and gifts from individuals. But costs began steeply rising. Since 1945 they have increased 75 per cent. The earnings of endowment funds began shrinking. Rising taxes affected the fortunes of those who gave to colleges.

MR. SPARKS decided that business ought to contribute, and put it to corporation presidents on a basis of self-interest. Business took the product of colleges, therefore ought to help maintain them. Gifts to colleges brought tax deductions. Business and the colleges in its area were part of the community; support of the colleges was an obligation and an investment in the future of the community.

But the clincher in Sparks' sales pitch was this:

The independent colleges are part of free enterprise, educating young people to apply their abilities; if these colleges are not supported by business, then they will have to solicit government aid—and then business will pay more in taxes than a generous contribution amounts to.

That clinched it, but raised a question —suppose the company contributed to Wabash, and every other college round about asked for money?

The answer was to put contributions on the Community Chest basis. Indiana in 1948 formed the first association of independent colleges, for which all educators joined in solicitation, and business contributions could be made to the pool, or to individual institutions, and one donation would settle it.

TODAY, there are 34 state and regional associations of the kind, in 39 states, representing more than 400 colleges. In the nation, there are more than 1,300 colleges and universities, professional and technical schools, city, state, and federal, denominational and nondenominational, but all supported without government

¶ "IN *recent years, business and education have eyed each other somewhat like the traditional strange bulldogs. There has been suspicion of radicalism on one side, and of narrow money grubbing on the other. To education, the business executive wears a dollar-checkered vest, and to business, the college man is the absent-minded professor who forgets his umbrella. However, we have entered a new era of understanding, based on personal contacts. Meeting each other, the professor and the executive discover that they are dealing with similar problems.*"

funds whatever. Like the Community Chest, fund raising is on a local or regional basis, and without drives, pep talks, lunches, or thermometers registering rising quotas.

The operation of the Independent Colleges of Southern California, Inc., is typical. Present membership is 11 independent institutions, five nonsectarian, and the others with church relationships. They have 3,890 men, 3,511 women students, total 7,401.

The association has a small downtown office, in charge of a woman manager with one assistant. This office prepares lists of business concerns considered likely prospects for solicitation; does the spadework leading up to informal meetings of a business executive and a college president; and distributes information about the movement, in the pamphlets printed and sold to local associations by the national organization in New York, the Council for Financial Aid to Education, Inc. This is a nonprofit public service organization, neither soliciting nor distributing funds.

Thus far, support has come largely from manufacturing concerns, and some utility companies, but college graduates are regularly used by mercantile, financial, and other sectors of business, to be contacted in the future.

A DATE is arranged, a college president calls on a company president, the latter understands that a contribution will be asked for. He may have summoned a little sales resistance. He will certainly have some questions.

His first question may be, "How much?" He is a college man himself, recognizes some obligation to help support colleges, is reassured by the pool scheme—what size check ought he to write?

It may be smaller than he thinks, when the needs of the local colleges are measured against regular support by local business and the size of his company.

The eleven colleges in the Southern California pool need from $300,000 to $1,000,000 a year, according to current expenses, and capital requirements for new buildings and equipment.

About 2,000 business concerns are listed as prospects for contributions, and the list is growing.

Assuming that only 1,000 concerns become contributors, the average amount would be from $300 to $1,000. As contributions will undoubtedly be gauged by the size of the company, large companies giving in the thousands, the average may be a surprise to the executive solicited—less than he feared.

AN outstanding contribution by The Hartford Electric Light Company to the Rensselaer Polytechnic Institute, in Troy, New York, was company shares that should yield enough money for several scholarships. Compared with legacies, bequests, endowments, new buildings, it may not seem much, in the light of college expenses.

But really, it is a handsome donation in several ways.

First, it is large in ratio to what the average company gift could be when mass support of colleges is attained. That is the long-range objective of educators, who say they must look to the business community for such support.

Second, it is a gift of income that can be depended upon year after year, and it is unrestricted. This utility company has

The Electronic Telephone Era

"THE day is fast approaching when a telephone exchange, for example, will be entirely electronic—automatic, without moving parts. Much higher engineering ability will be needed for designing, operation, and maintenance. This is true of other business. Engineers and technologists will need more intense education, and company training after that, and constant retraining. Such men will start in the colleges—and the colleges will need support and teamwork from business."

received many graduates from that particular institution. It recognizes the obligation and makes a gift of what educators call "$2 dollars."

It is natural in giving business money, to support education, to think of some particular job for the money to do—especially if it is new money. Aunt Rebecca leaves money to build a library, bearing Uncle Hiram's name. The company executive reasons, "We need engineers, let us ask the college to educate more engineers," and the money is earmarked for that purpose.

In other words, specifications for people are drawn up, and history abounds in dull scholars who turned out to be geniuses in spite of their marks at school, and the business executive himself knows how differently individuals turn out after hiring.

FOR the utility executive this earmarking of gifts has a regulatory angle. Where is the money to come from? How is the state commission going to look at the gift? How is it to be charged under standard accounting rules?

Earmarking of a utility corporation gift may be one way of legalizing it, freeing

directors from the liability of making it good themselves. The legal aspects of such donations are summarized in one of the pamphlets available from the national council.[1] Broadly, a corporation is a member of the community and a reasonable gift for education may be one of its obligations. For a regulated corporation, the case may not be so broad. Such gifts are likely to come up in rate hearings, to be criticized by customers, or self-appointed representatives for the public.[2]

How about shareholders? So far, when management has taken pains to explain such gifts as beneficial to the company there has been little criticism. An amusing instance cited was the 92-year-old stockholder who objected, but he had objected to everything the company had ever done. On the other hand, many stockholders are ahead of management on the needs of education.

"We are glad to get the money," say educators when gifts are earmarked, "but unrestricted money is the most useful, and the hardest to get."

AN unrestricted gift is a free enterprise gift, enabling the college trustees to use it wherever it is most needed. Now it may be for current expenses, and again for capital investment in buildings and equipment. The times change, and a restricted gift can impose the dead hand on college management.

Viewed as business enterprises, requiring capital for growth, colleges are mostly "small business." The public hears of millions given from great fortunes or foundations, but today, according to another pamphlet[3] of the national organization, there are only 29 American institutions of higher learning with endowments of $20,000,000 or more, the accumulations of legacies and individual donations over several generations. In contrast, a recent count shows that there are at least 66 billion-dollar corporations in the United States.

Alumni donations have been making up the shrinkage in large gifts and decreasing revenue from endowment investments. In a recent year, old "grads" gave to their alma maters nearly $24,000,000, mostly unrestricted. On a 5 per cent basis, this is equal to returns from $480,000,000 of endowments. Alumni have in some cases set up funds into which donations are paid, and colleges depend upon former students as one major source of funds. One corporation, General Electric, matches gifts up to $1,000 made by alumni employees who contribute to their colleges, and in a recent year the company's contributions were more than $100,000, matching gifts by 2,576 employees

THE earmarked gift may go to a department that is already strong. There is a trend today toward designating gifts for science and "practical" teaching, to the neglect of the humanities —art, literature, languages, history, and so on—that are being more and more stressed, even in technological education. This situation is comparable to having a company's revenue restricted to certain departments, at the expense of other de-

[1] "Legal Aspects of a Corporate Gift," Council for Financial Aid to Education, Inc. 6 East 45th street, New York 17, New York.

[2] See "Regulatory Trends," PUBLIC UTILITIES FORTNIGHTLY, November 10, 1955, p. 830.

[3] "Unrestricted Funds," Council for Financial Aid to Education, Inc. 6 East 45th street, New York 17, New York.

partments, or to having capital for new plant diverted to current expenses.

An illustration of how the restricted gift may hamper a college is given by the national council:

The library is the heart and center of any institution of higher education. It is nearly always supported from general, unrestricted funds.

The special research project given colleges by business and government is an increasing source of revenue, welcome money, giving employment to faculty and students, and bringing prestige when results are published. Such projects are, of course, most restricted of all.

One great university in a typical year received nearly 8 per cent of its operating budget in research projects. The library is of utmost value in such research. This institution's library services cost $600,000 that year, equal to the income from $12,000,000 to $15,000,000 of endowments. None of the research money goes to the library or college plant, and so it may be a drain on the college.

"The unrestricted gift," say educators, "is more imaginative and realistic, of more fundamental assistance to the institution."

When business gives unrestrictedly to local or regional colleges, or those institutions that have been of special service to it, that is imaginative and realistic money. For different regions, different conditions, as may be shown by the situation in southern California.

This region is academically young. Its oldest educational institutions go back only about seventy-five years, and out of eleven colleges in the soliciting group, six are not over thirty years old, and the youngest only eight.

Consequently, these colleges have smaller endowments than those in an older region, and also have fewer alumni, if any at all.

One eight-year-old college at Palos Verdes, folded up a few months ago, after a brave fight. It needed $150,000, had no endowments or church support, and volunteer solicitation raised only $25,000. It was not enough.

Of what importance is one small-town college, started in a barracks, on donated land, with a handful of students?

Of the same importance as a baby.

In a region with headlong growth of population and industry, there will be more and more young people to educate, more needed by industry.

Income from endowments has dropped from 26 to 14 per cent in ten years,

¶ "A LITTLE *worry has arisen over comparisons made between independent and tax-supported colleges. The latter need private contributions as well. There is no 'battle' between them, say educators, and there must be no 'antistate college' spirit. All educational institutions are needed, and all face a great increase in students the coming decade, as postdepression babies go to college. Educators' eyes are on the future as well as their present financial problems. There are going to be demands of quality as well as numbers.*"

but the outlook for support from southern California business concerns is encouraging. The first campaign brought contributions from 16 firms, out of 100 interviewed; the second from 50 out of 220; the third campaign, now under way, schedules calls on at least 330 firms, by college presidents who have each pledged from ten to fifteen whole days of time. Most encouraging has been a mail campaign, explaining the needs to firms that could not be visited, which brought substantial contributions. Over the nation, the business support grows each year, as business understands the situation.

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"Tomorrow you'll need a master's degree to get a job!" is the way one engineer puts it, and that is perhaps not so extreme a view, when the future years are appraised from the business standpoint. Any executive, looking ahead, can see that better educated management as well as technologists will be needed for the more complex organizations and plants of tomorrow.

Out of the colleges must come what Dr. Lee A. DuBridge, president of "Cal-Tech," calls the upper 3 per cent of the nation's total working force. For many years ahead, the demand will steadily increase for "top cream" in management as well as technology. The supply cannot be increased indefinitely. The highest talent, he warns, must be sought out, directed, supported, and conserved in the colleges. And immediately—now!

BESIDES financial support, all colleges need closer contacts with business—and vice versa.

In recent years, business and education have eyed each other somewhat like the traditional strange bulldogs. There has been suspicion of radicalism on one side, and of narrow money grubbing on the other. To education, the business executive wears a dollar-checkered vest, and to business, the college man is the absent-minded professor who forgets his umbrella.

However, we have entered a new era of understanding, based on personal contacts. Meeting each other, the professor and the executive discover that they are dealing with similar problems. Business needs the best product of the college, and the professor needs close acquaintance with business in preparing his students for the real world. And business more and more is going to the professor for counsel, and to the colleges for research.

Colleges are inviting business executives to lecture on their methods and problems, as at the University of California.[4] But these are full-dress affairs, planned and fitted into college courses, and less formal contacts are being made.

Typical are the seminars to which businessmen are invited by Dr. Arthur G. Coons, president of Occidental

[4] "When Utility Vice Presidents Turn into Professors," by James H. Collins, PUBLIC UTILITIES FORTNIGHTLY, August 27, 1953, p. 298.

College, Los Angeles. Students discuss an economic, governmental, social, or other problem; it would have to be very much "ivory tower" not to have interest these days for a businessman. The latter listens as students present their views, sees their minds at work, sees business angles. At the end, he is invited to ask questions, is probably questioned in turn; acquaintance is established all around.

The businessman called upon by a college president may accept membership on the soliciting group's advisory council, made up of executives in industry, utility services, banking, and trade. He regularly meets with educators, advises about contacts, undertakes contacts himself—"is in the army now."

Business itself is making contacts, with schools as well as colleges. Typically, the Bakelite Company takes local high school teachers onto its payroll for summer vacations, employs them in different departments for six weeks, then lets them choose a department in which to work for two weeks. The purpose is to make them acquainted with the business, for the benefit of their students. This plan was devised by W. W. Wing, production executive, when he discovered how little his own kids, in high school, knew about business.

Is there any real shortage of young engineers?

One telephone executive began to investigate, after college recruiting and newspaper advertising brought diminishing results, and has come to the conclusion that engineering ability is being misused.

Some young engineers develop management ambitions and ability, and make jobs in executive departments where they are needed, but lost to engineering.

Other graduates do best in engineering, but maybe in the tradition of their first bridge, want to build the whole bridge themselves. There is much detail in utility engineering that can be turned over to assistants, or a machine. Engineering has reached a point like that in the garment trade years ago, when the coat, pants, and vest could be split up into tasks. The young engineer's attention can be directed to the creative side of engineering.

Then, there is a good deal of "engineering" work that could be done by the most skillful technicians, not engineering in the professional sense, but for which technicians could be company-trained, conserving engineers.

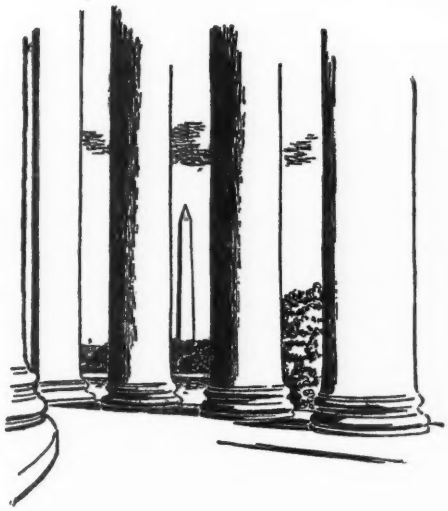
Finally, there is a suspicion of herding by firms that hire the graduates and put them at work on nonengineering jobs for backlog. Those firms may be spotted by large turnover in engineering employees.

Present scarcity might be overcome by restudy of engineering work. The real shortage is that looming up tomorrow.

The day is fast approaching when a telephone exchange, for example, will be entirely electronic—automatic, without moving parts. Much higher engineering ability will be needed for designing, operation, and maintenance. This is true of other business. Engineers and technologists will need more intense education, and company training after that, and constant retraining.

Such men will start in the colleges—and the colleges will need support and teamwork from business.

Washington and the Utilities



Memphis Plans Power Plant

ADMINISTRATION officials in Washington are watching with interest steps taken by the newly inaugurated Mayor Edmund Orgill of Memphis, Tennessee. Orgill, who was elected in a special balloting last November, succeeds the late Mayor Frank T. Tobey in more ways than one. He not only takes over Tobey's office, but also the deceased mayor's promise to President Eisenhower that the city would take prompt and effective steps to finance and build its own power plant as an alternative to the now defunct Dixon-Yates contract arrangement.

Orgill campaigned in opposition to another candidate who wanted to run out on the late mayor's commitment and try to force a showdown in favor of the city continuing to depend more or less entirely on TVA for future power supply. Under the circumstances, Orgill's election was generally regarded as a referendum in favor of the city plant, which will be coordinated with but not primarily dependent upon TVA's system for the city's expanding power needs.

Eight financial houses (five from New York) conferred with Memphis city officials on methods of raising more than $100,000,000 needed to construct the gigantic power plant. Burns & Roe, Inc., 233 Broadway, New York city, was expected to submit a complete study shortly after January 1st, which would outline, among other things, an exact site for the plant. Advance cost estimates ranged from "somewhat less than $100,000,000" to a maximum of about $130,000,000. The Dixon-Yates proposal for a private company plant at West Memphis, Arkansas, envisaged an outlay of $107,000,000. Advance cost estimates were uncertain because there was still some question about the size of three generators to be installed. The contract had already been awarded for three 200,000-kilowatt turbine generators, with a 60-day option to increase their capacity to 250,000 kilowatts each. The contract delivery date on the generators was November, 1957, although labor difficulties of the contractor—Westinghouse Electric—might, in the opinion of city officials, have some slight effect on any proposed timetable. One very ironic possibility was noted in the rumor that the city of Memphis might be considering an out-of-state plant site such as brought so

much condemnation of the Dixon-Yates contract by city officials.

MEMPHIS now buys its electric power from the Tennessee Valley Authority but TVA power is being drained heavily by the demands of the AEC. As a result, the authority has been unable to assure Memphis that it can furnish additional power which the city needs for expansion. The Memphis-TVA contract expires in June, 1958.

It was because of this situation that the Dixon-Yates contract with the government was negotiated. The idea was that the privately built plant, across the river in West Memphis, Arkansas, could furnish power to the AEC installations and thus permit TVA to increase its output to other customers. When Memphis decided to build its own plant, there was no necessity, the government felt, for proceeding with the Dixon-Yates project.

What interests administration officials in Washington, however, is the possibility that the Memphis arrangements might establish a pattern for other Tennessee cities which will eventually have to make similar plans as their power needs expand. Congress has, so far, indicated no disposition to appropriate the money to allow TVA to build plants indefinitely with federal tax funds for the primary purpose of supplying Tennessee cities in the future. Nashville is the next city which will have to consider its long-term contract arrangements with TVA, and in due course Knoxville and Chattanooga likewise have to face the problem.

While the arguments politically and otherwise growing out of the Dixon-Yates contract still cloud economic considerations, administration officials have not closed the door to the possibility that private capital might still be enlisted to take on some of the load where Congress says TVA must leave off in the future.

Gas Fight Shapes Up

THE big battle of the early part of the 1956 session was already shaping up as Congress gathered in Washington to hear the President's annual State of the Union Message. With observers agreed on a close result, the fate of the Fulbright-Harris Bill to exempt independent producers of natural gas from the general jurisdiction of the FPC hung in the balance.

An early vote in the Senate would definitely favor passage of the bill, and that is just what Senator Price Daniel (Democrat, Texas) forecasts. On the other hand, the opposition, virtually conceding that it lacks enough votes to defeat the bill in any such early tests of strength, is talking about delaying tactics. Senator Douglas (Democrat, Illinois) threatened to call up the politically explosive civil rights legislation if the Senate Majority Leader, Senator Johnson of Texas, persisted in plans to call up the Fulbright Bill. If Douglas found enough support among colleagues to put this strategy into effect, both the gas bill and the civil rights legislation could be tied up.

But, in the process, Democratic party unity might take a severe beating. And that is just what party leaders do not want in the critically important year of 1956. Hence the back-scenes talk of compromise and dropping the whole business for another year. And since the gas bill fight cuts across both parties, a "motion to recommit" might be a polite gentleman's solution of letting a number of Senators on both sides of the aisle get off the hook.

But the gas bill supporters are not having any part of compromise talk. They claim that victory is in the bag and act as if they believe it. It would be an easy enough job to collect speeches of confidence on both sides of this question, but with the showdown rapidly approaching,

it is generally recognized that the payoff will not be in speeches. Organization is what will count at this point.

JUST before New Year's, the retiring Mayor Alex M. Clark of Indianapolis, Indiana, announced he had accepted the chairmanship of the Joint Committee of Consumers and Small Gas Producers. The Republican mayor completed his term as Indianapolis' chief executive on December 31st. Clark charged in his announcement that "certain big eastern utilities" are holding back "proper rate reductions" from consumers. He said the utilities have made great savings through use of natural gas, but they have not been passed on.

On the other side, Representative Heselton (Republican, Massachusetts) said his observations during a trip in the Southwest convinced him that opposition to House-passed legislation exempting natural gas producers from federal regulation will "make itself felt more and more." He said in a statement through his office that he was "amazed" at the unfavorable general public reaction to the bill which he found in the Southwest while on vacation. His opinion, he said, was based on conversations, and in reading newspapers and magazines.

"I am convinced that the consuming public in the Southwest had little knowledge of what the legislation was, but they are beginning to understand it and what it will do," the Congressman said. He recently predicted that if the House-passed bill should be amended and returned to the House again or to a Senate-House conference committee, it would be "a dead duck." Its passage in the House last session was by a narrow margin.

Speaking in favor of the bill, Frank O. Prior, president of the Standard Oil Company of Indiana, poured a little gasoline on the raging fire of controversy when he charged, in a speech in Detroit, Michigan, on December 20th, that powerful gas utility companies, which "take the largest part of the customer's gas dollar," are leading the fight to put the natural gas producers under utility controls.

Prior claimed that the establishment of the Council of Local Gas Companies to oppose the Fulbright-Harris Bill indicated that the opposition was not so much concerned with protecting consumers as the distributing utilities "having local monopolies." Such commentary was hardly likely to mend the rift which has developed in the gas industry as a whole as between the producing and consuming industry and the pipelines.

Panhandle Eastern Wins a Trick

THE U. S. circuit court of appeals for the District of Columbia has decided to hear arguments on the procedure followed by the Federal Power Commission in authorizing four natural gas producers to sell gas for a new Louisiana-to-Michigan pipeline. The court denied motions made by the commission and American Louisiana Pipe Line Company, which is building the new line, seeking dismissal of appeals brought against the commission's action by Panhandle Eastern Pipe Line Company and Memphis, Tennessee. The American Louisiana line would be a competitor of Panhandle Eastern in midwestern markets. Memphis is concerned about the effect of the new line on its gas supplies.

Following a hearing from which Panhandle Eastern and Memphis were excluded, the commission granted certificates of convenience and necessity to four producers who had signed contracts with American Louisiana. Panhandle Eastern contended it and the city had been denied

"due process of law" by the commission's refusal to allow them to participate in the producer hearing. In refusing to throw out the appeal, the court said the "interests of justice will be served" if the issues are heard fully by the court at a later date. No date was set.

Charles V. Shannon, American Louisiana attorney, said the court's ruling would have no effect on the construction, now under way, of the $140,000,000 system linking Gulf coast gas fields with consumers in Detroit, Milwaukee, and other midwestern cities.

More Gas Co-ops?

DEAN H. MITCHELL, president of the Northern Indiana Public Service Company, in his rôle as head of the American Gas Association, has alerted commercial gas utility interests about the possible spread of co-operatives in that industry in a letter sent to association members shortly before the holidays. He said:

> The emergence of the co-operative movement as a vehicle to establish public ownership in the gas distribution business in Idaho calls attention to the continuing growth in an area that I feel should be of much concern to our industry.
>
> Already, eight Idaho communities have entered into agreements with bond houses to establish nonprofit co-operative systems. A ninth also is planning such a step, according to reports from Idaho.
>
> Considered in light of the 1955 public "housing amendments"—authorizing a $100,000,000 federal revolving fund to assist cities in financing gas distribution systems, among other local improvements—this Idaho and northwestern development takes on added significance.

Behind this action of the investor-owned gas interests was a long fight to bring natural gas to the Pacific Northwest. This was culminated on November 25th when the Federal Power Commission authorized the Pacific Northwest Pipeline Corporation to import 300,000,000 cubic feet of Canadian natural gas a day from the Westcoast Transmission Company, Ltd.

The FPC approval raised the daily natural gas potential to 643,000,000 cubic feet for this last major geographic area of the United States without such fuel service. Initial deliveries from the San Juan basin of New Mexico-Colorado will start flowing into the region late next summer.

THE question of who will actually distribute the gas in the Pacific Northwest localities may develop into a rivalry between investor-owned utilities and those favoring co-operative or municipal ownership. The commercial companies have secured franchises in a number of the localities.

But the public ownership forces have been picking up speed in recent months. And, as Mitchell pointed out, the public housing amendments of 1955 (Title II) do offer a possible alternative financing approach.

The New York Times, in a signed article by Gene Smith, dated December 24, 1955, summarized the situation in nine Washington towns, the largest of which had a population of 8,300—thereby qualifying under the public housing measure. According to the *Times* article, Pullman (Washington) and other towns in the region acknowledge that they have been approached by several municipal bond houses with offers for financing their own systems through the issuance of revenue bonds.

Wire and Wireless Communication

Hush-a-phone Ban Upheld

THE Federal Communications Commission on December 23rd upheld the right of the American Telephone and Telegraph Company and its associated companies to forbid the use of telephone attachments not furnished by these companies or sanctioned by them.

The commission, acting on a seven-year-old case, ruled that the phone companies properly objected to the use of the "hush-a-phone" device on Bell system equipment. The "hush-a-phone" is a cup-like device which snaps on the telephone mouthpiece, shuts out surrounding noise, and provides privacy to the telephone talker.

Hush-a-Phone Corporation of New York city and its president, Harry C. Tuttle, brought a complaint against the Bell system regulations on December 22, 1948, and demanded that the FCC order these companies to permit hush-a-phone use.

The matter was heard in early 1950, but because of the death of the hearing examiner, who ordinarily would recommend an initial decision, the commission itself took over the hearing record for action. It decided initially in February, 1951, that the Hush-a-Phone complaint should be dismissed, but held the case open for further pleadings, and possibly reconsideration.

The final decision issued last month said:

> The unrestricted use of the hush-a-phone could result in a general deterioration of the quality of interstate and foreign telephone service. Accordingly, it is not an unjust and unreasonable practice upon the part of the defendants to prohibit its use in connection with their telephone services.
>
> It is necessary and proper that the use of foreign attachments be subject to control by the defendants through reasonable tariff regulations.

The commission said the hush-a-phone provides "significant privacy" against eavesdroppers and also excludes considerable noise from telephone circuits. On the other hand, the FCC found that the device sometimes results in loss of voice intelligibility, and also has an adverse effect upon voice recognition and naturalness.

The commission noted that the Bell system companies offer to their telephone users push-button switches to exclude surrounding noise from phone circuits.

New York Phone Rate

THE New York commission rejected the New York Telephone Company's

request for a statewide rate increase, but "advised" adjustments that will cost some suburbanites between 25 and 50 cents more a month and bring the company about $2,500,000 a year.

THE rate base issue, which has been a matter of controversy between the company and the commission, was not a factor in this interim proceeding. The reason was that the commission's previous opinion, refusing to depart from its traditional adherence to original cost—which was reversed by the New York appellate division (3 to 2), 8 PUR3d 229—is now pending before the New York court of appeals. In the more recent proceeding, however, the company agreed to waive the question of original cost *versus* fair value in the rate base in an effort to obtain immediate temporary rate relief, which the company claimed was warranted even on an original cost basis, gauged by the 6 per cent return allowance which the commission has held as reasonable for the company.

Turning down the company's proposals for various rate increases to bring it $34,380,000 more a year, the New York commission ruled that the telephone company is entitled to an additional $8,000,000 annual revenue "to bring the company's return to 6 per cent," consistent with the commission's policy, by giving it additional net income of about $3,700,000 a year after taxes.

An unusual, but noteworthy, feature of the commission's decision was its vigorous condemnation of the case presented by the city of New York through a professional witness in an attempt to justify a temporary rate reduction of $31,000,000 and suggesting a permanent rate reduction of $41,000,000 (compared with the rates the company was seeking to have increased). The commission criticized the methods used in the city's case, especially with respect to estimated cost of money. It condemned the theoretical hypothecation of a higher debt limit (50 per cent) than the company had actually established (32 per cent), which was generally in line with the Bell system average.

THE commission also found that the city's witness had erroneously computed comparative cost of equity capital for electric utilities, and mistakenly applied earnings-price ratios from total equity to the par value of the telephone company's own common stock.

The case as a whole, the commission declared in a statement issued last month, was "the most complicated rate proceeding to come before the public service commission in many years," involving the telephone company, the city of New York—which sought a rate reduction—hotels and department stores throughout the state, and municipalities and various organizations opposing increases.

It is the third time in the last four years that the commission has turned down the company's request for a general rate increase. The company had sought basic monthly rate increases of 30 cents for residential and 75 cents for business main service; higher intrastate long-distance rates, increased charges on additional calls above the monthly maximum, and revision of various charges for special service, such as raising hotel phone calls from the present 16 cents to 22 cents.

In granting the company the $8,000,000 in additional revenue, the commission said it was to obtain $5,750,000 from "special and supplemental services," such as extension PBX (private branch exchange) and private line stations and PBX equipment, such as switchboards and other special facilities used by business firms.

About $2,250,000 is to come from "certain exchange areas in various parts of the

state where the number of telephones has increased materially since 1948." The company, the commission said, "is advised to reclassify the local calling areas according to the number of telephones receiving service and put them on the same rate basis as other calling areas of the same size."

A COMMISSION spokesman explained that there is an eight-step basic rate scale for the number of telephones on an exchange. The lowest step is up to 1,400 phones, then 1,400-4,000; 4,000 to 10,000; 10,000 to 20,000; 20,000 to 35,000; 35,000 to 70,000; 70,000 to 150,000; and finally, 150,000 and over, for which the basic rate is $5, in New York city, plus city and federal tax.

Suburban growth in about 150 exchange areas, the commission spokesman estimated, would call for a reclassification of the scale and in these areas there will be rate increases. He said New York city and the larger cities or longer-established communities would not be affected.

This was confirmed by a telephone company spokesman, who said the regrouping would not affect the city but would affect the suburbs. In the city and other areas, he said, there will be an increase on extension telephones, with the residential message rate going up 10 cents a month per extension, and 15 cents per extension for message rate and flat rate business extensions.

Keith S. McHugh, president of the New York Telephone Company, called the commission's ruling "extremely disappointing." The increase granted, he said, "amounts to just a little over one per cent of company revenues." He noted that "it will help, of course, but it is wholly inadequate for the job we have to do to meet the public's demands for more service and to keep on improving service generally." He pointed out that "telephone rates have increased only 16 per cent over prewar rates while consumer prices generally are up 92 per cent."

The commission directed the company to submit to it its new tariff schedules, showing the distribution of the additional revenue. An increase of one cent was allowed on outgoing hotel telephone calls, raising the rate to 17 cents a call, "because of the increase on special equipment."

REA Co-op Loan Denied

THE Indiana Public Service Commission has taken very forthright action in denying approval of a proposed REA loan for a small telephone co-operative in that state. The amount involved was not large. The co-op (Hancock Rural Telephone Corporation) sought to borrow $70,000 in addition to a much larger amount.

The Hancock co-op was incorporated late in 1950, and now serves about 800 subscribers. In 1951 it got an REA loan (with commission approval) of $243,000. It got another in 1952 for $188,000—or a total of $431,000. Of this amount, the co-op was indebted to REA—as of the time it applied for approval of the additional loan of $70,000, in the amount of $425,267 in unpaid principal and an additional amount of $14,873.61 in unpaid interest. The co-op was even delinquent in payment of its current accounts—owing $7,651—mostly in back office rent.

Funds already borrowed had been expended in plant construction and it was now proposed to use the additional $70,000 (1) to pay off delinquent interest due, (2) to install additional services to take on another 200 subscribers, (3) to spend any balance remaining to convert a part of the plant to a numbered dialing system. The co-op had never since its organization been able to operate its plant so as to provide even a net income exclusive of fixed charges.

Financial News and Comment

By OWEN ELY

Public Power Developments And the Preference Clause

THE "preference clause" of the Federal Power Act is a disturbing factor in the administration's efforts to reconcile public and private hydro power programs. The controversy over sale of power from the Clark Hill dam on the Savannah river —whether it should be sold directly to the Georgia co-ops, or to Georgia Power Company for resale at federally prescribed rates—still continues. The Democrats on the House Government Operations Subcommittee insist that the sales must be made directly to the public power retailers, based on an opinion by the Attorney General last July.

However, Assistant Interior Secretary Aandahl has indicated that he is hopeful that a compromise contract can be worked out. The best way to get power to the co-ops is to use Georgia Power's lines, but the company thus far has refused to accept the ordinary "wheeling" contract used in similar situations, which permits title to the power to remain with the co-ops. Some Democrats would of course like to have the co-ops build their own transmission lines (with federal financing), but Congress for some years has refused to appropriate money for these parallel and unnecessary lines.

In the Pacific Northwest four new federally built multipurpose dams were dedicated last summer—Lucky Peak, Albeni Falls, Lookout Point, and Dexter. These, along with part of the huge Chief Joseph project, have cost over $300,000,000 thus far and should add about 433,000 kilowatts to the Northwest Power Pool.

The first four of sixteen generators at the $169,000,000 Chief Joseph dam—each with a rated capacity of 64,000 kilowatts —were scheduled to go into operation by the end of 1955. The final unit is expected to be completed in 1958, making the plant's total capacity 1,024,000 kilowatts. It will be over twice the size of Bonneville and will slightly exceed McNary's eventual capacity. Another huge dam, The Dalles on the Columbia river, has also been under construction since 1952 but its full

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capacity of 1,122,000 kilowatts will not be in operation until 1960.

With these big dams nearing completion and the federal government gradually relinquishing its rôle as dam builder, some 45 new projects of all sizes are being considered, some of these following the "partnership" plan. But a major difficulty is the preference clause, which gives public power retailers a preference over private utilities to power from federal dams. The clause works all right when there is plenty of hydro available for secondary power, but during drought periods (as in 1952) the private utilities have to use relatively expensive steam power in order to get by, since most of the hydro power then goes to the PUD's and municipalities. Now the utilities are seeking new alternative methods.

The 1,105,000-kilowatt John Day project is one of the remaining prize locations, near Portland. President Kinsey Robinson of Washington Water Power last spring proposed that the $310,000,000 project should be built mainly by a group of three private utilities which would put up $273,000,000 to build the hydro plant while the federal government could contribute $37,000,000 for navigation. Douglas McKay, Interior Department Secretary, heartily approves the plan. The utilities would relinquish their rights to the power after fifty years, having amortized their plant cost during this period by the value of the electricity received and sold. It has been proposed in Congress to broaden the plan to include local PUD's, etc. But the private utilities would not be hamstrung by the preference clause, as they would be if the project were a federally built dam. John Day appears to be headed for a political showdown next year, and may become a political watchword like Hell's Canyon, Dixon-Yates, and TVA.

Two other big projects incorporate the partnership idea, but also seek to avoid the issue over the preference clause. They are really three-way projects, involving federal power sites, PUD financing, and sales of power at wholesale to both private and public utilities. Priest Rapids is being developed by a PUD, but since it must make firm sales contracts with both private and public power retailers in order to get its financing done, it will omit the preference clause.

The FPC recently granted a license to PUD No. 2 of Grant county, Washington, for the proposed Priest Rapids and Wanapum hydro developments on the Columbia river. Each dam will develop about 600,-

CURRENT YIELD YARDSTICKS

	*Dec. 23, 1955**	*1955 Range*		*1954 Range*		*1953 Range*	
		High	*Low*	*High*	*Low*	*High*	*Low*
U. S. Long-term Bonds—Taxable	2.89%	2.95%	2.62%	2.70%	2.41%	3.15%	2.70%
Utility Bonds—Aaa	3.17	3.19	2.93	3.13	2.86	3.43	3.01
Aa	3.24	3.26	2.99	3.19	2.92	3.59	3.07
A	3.35	3.36	3.12	3.37	3.11	3.72	3.23
Baa	3.51	3.51	3.37	3.72	3.37	3.94	3.50
Utility Preferred Stocks—							
High-grade	3.96	3.98	3.89	4.09	3.85	4.45	4.01
Medium-grade ..	4.26	4.32	4.19	4.51	4.17	4.87	4.43
24 Electric Utility Common Stocks ..	4.61	4.64	4.32	5.23	4.50	5.72	5.01
30 Gas Utility Common Stocks	4.61	4.70	4.29	5.22	4.64	5.66	4.74

* Approximate date.

Latest available Moody indices are used for utility bonds and stocks; Standard & Poor's index for government bonds.

000 kilowatts and the two will cost about $350,000,000. The Priest Rapids project had been delayed by fears that inadequate facilities would be provided to protect fish and wild life resources, but apparently this difficulty has been cleared up.

The other project is the Rocky Reach dam upstream from Priest Rapids. This will be a relatively expensive project—385,000-kilowatt firm power at a cost of $225,000,000. It is sponsored by the Puget Sound Utilities Council, which consists of a private utility (Puget Sound Power & Light), two PUD's (Chelan and Snohomish), and two cities (Seattle and Tacoma), but actually it will be financed by the Chelan PUD.

An all-private utility group has set up a 1,000,000-kilowatt project—the Mountain Sheep and Pleasant Valley dams—with an estimated cost of only $144,000,000 for the generating plant. These four utilities—Portland General Electric, Pacific Power & Light, Washington Water Power, and Montana Power—have created a new company, Pacific Northwest Power Company, to carry out the project.

They have, however, encountered considerable political opposition, the Northwest Public Power Association having filed a protest with the FPC. The new dams would be substituted for a more expensive multipurpose dam at Nez Perse. Despite the fact that Nez Perse might ruin one of the most important salmon-spawning streams, it is said that public proponents will fight for the big dam in the FPC and the courts. The issue is similar to that at Hell's Canyon.

Among the smaller power projects sponsored by northwestern utilities are the following: Puget Sound Power & Light has just requested an FPC license for an 85,000-kilowatt project on the Baker river.

25 LEADING UTILITIES—ESTIMATED 1956 EARNINGS AND DIVIDENDS PER SHARE

Electric Companies	Common Shares Outstanding (thousands)	EARNINGS Five-Year Average 1950-1954	EARNINGS 1954	EARNINGS 1955 Estimated	EARNINGS 1956 Preliminary Estimates	DIVIDENDS Five-Year Average 1950-1954	DIVIDENDS 1954	DIVIDENDS 1955 Paid	DIVIDENDS 1956 Preliminary Estimates
American Gas & Electric	12,853	$2.31	$2.52	$3.05	$3.40	$1.51	$1.68	$1.85	$2.00*
American Natural Gas	4,421	2.80	3.52	3.10	3.60	1.71	2.00	2.10	2.20
Boston Edison	2,716	3.13	3.12	3.40	3.70	2.80	2.80	2.80	3.00
Central & South West	9,691	1.62	2.00	2.05	2.25	1.00	1.20	1.34	1.40
Commonwealth Edison	17,741	2.27	2.70	2.70	2.85	1.74	1.80	1.90	2.00
Consolidated Edison	13,692	2.65	2.98	3.15	3.30	2.08	2.40	2.40	2.50
Consolidated Natural Gas	8,126	2.44	2.67	2.75	2.85	1.20	1.25	1.50	1.50
Consumers Power	8,240	2.72	2.95	3.05	3.30	1.97	2.10	2.10	2.30
Detroit Edison	10,798	1.91	2.05	2.45	2.70	1.38	1.60	1.60	1.80
El Paso Natural Gas	4,889	2.74	1.89	2.50	2.75	1.61	2.00	2.00	2.00
Florida Power & Light	6,000	1.44	1.75	2.10	2.50	0.75	0.88	1.025	1.20
Gulf States Utilities	4,222	1.59	1.88	2.20	2.60	1.07	1.35	1.45	1.60
Houston Lighting & Power	5,837	1.68	2.19	2.55	2.85	0.92	1.14	1.25	1.40
Middle South Utilities	7,600	1.94	2.13	2.25	2.35	1.27	1.425	1.50	1.60
Niagara Mohawk Power	11,556	1.99	2.11	2.20	2.35	1.53	1.60	1.65	1.80
No. States Power (Minn.)	13,418	0.99	1.07	1.15	1.20	0.72	0.80	0.80	0.85
Ohio Edison	5,806	2.93	3.02	3.60	3.95	2.09	2.20	2.27	2.48
Pacific Gas & Electric	16,256	2.50	2.88	3.30	3.65	2.05	2.20	2.20	2.30
Pacific Lighting	6,000	2.30	2.38	2.60	2.75	1.62	2.00	2.00	2.00
Panhandle Eastern Pipe Line	3,379	3.97	4.26	5.00	5.50	2.30	2.50	2.875	3.00
Philadelphia Electric	12,064	2.23	2.25	2.30	2.45	1.53	1.75	1.80	1.90
Southern California Edison	7,454	3.02	3.06	3.30	3.55	2.00	2.00	2.30	2.40
Southern Company	19,595	1.16	1.29	1.35	1.50	0.80	0.80	0.90	0.95
Texas Utilities	11,810	1.54	1.93	2.10	2.30	0.81	1.04	1.16	1.28
Virginia Electric & Power	6,600	1.85	2.20	2.60	2.85	1.31	1.40	1.55	1.65

** Plus stock dividend. Note: All per share earnings and dividends are adjusted to reflect stock dividends and stock splits.*

Source, National Securities & Research Corporation.

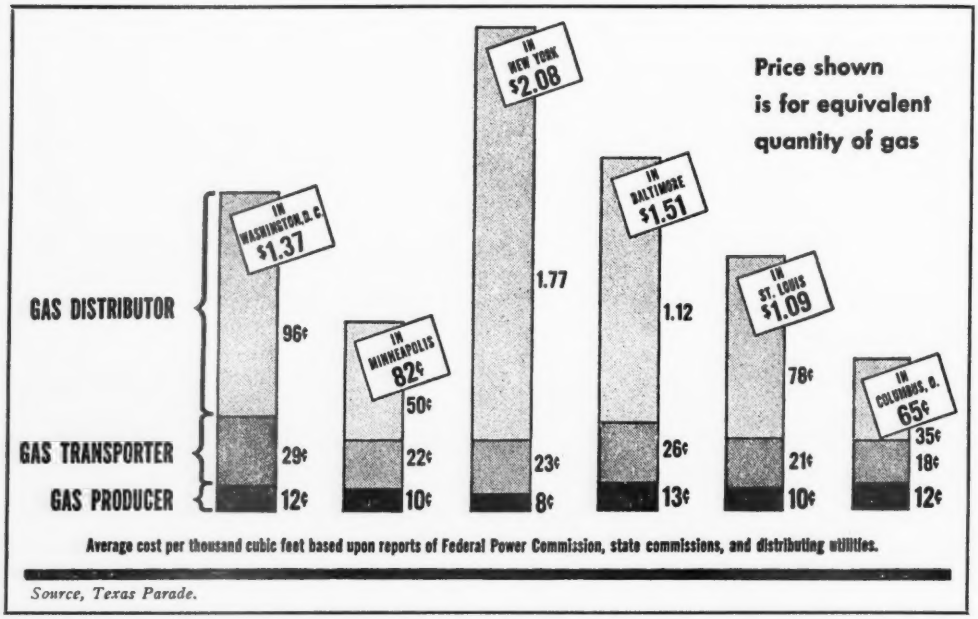
Portland General Electric has asked for an FPC license for a $13,000,000 hydro project to develop 43,000 kilowatts in northwestern Oregon. The Pend Oreille (Washington) PUD recently sold some $20,000,000 revenue bonds to build a hydro plant at Box Canyon, the power from which would go to the city of Seattle.

It will be recalled that at a recent special election in Stevens county, Washington, the voters decided to sell the PUD property to Washington Water Power for $2,905,000, instead of the reverse procedure of ordering the private utility to sell its holdings in this county to the PUD for $3,100,000. The ballots were 71 per cent in favor of the private utility, possibly due to the fact that the PUD's rates were over twice those of Washington Water Power (the former being largely rural, however, while the latter's are mainly municipal).

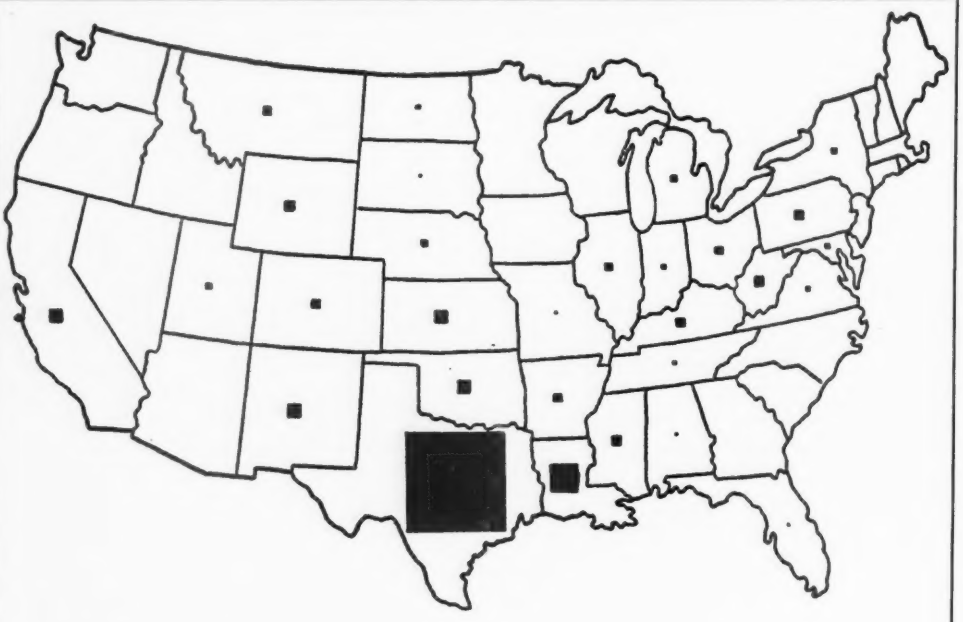
Despite the fact that the Federal Power Commission recently gave Idaho Power Company a green light on construction of three dams (replacing the proposed $500,000,000 multipurpose federal dam at Hell's Canyon), opposition to the project from ten public power groups has continued in the courts. Late in November the U. S. court of appeals at Washington was asked to set aside the FPC order, which they claimed would do violence to a federal "comprehensive plan" for the Columbia river basin. Bills have also been introduced in Congress to authorize the federal project. Of course the public power advocates emphasize the fact that the high dam would promote flood control, navigation, and recreation (as well as power), presumably justifying the much greater cost of the project. But Idaho Power Company has already signed a contract with the Morrison-Knudsen Company to construct the first two of its three dams at a cost of $87,000,000, with work to start immediately.

Republican plans to develop federal hydro power seem to center in the Colorado river, while the Democrats prefer the Columbia river and its tributary, the Snake. However, Interior Secretary McKay stated a few weeks ago that the department would drop the controversial Echo Park dam from the proposed Upper Colorado river storage project. The department had previously insisted that the $176,000,000 dam was a key unit in the billion-dollar storage project. The House Interior Committee omitted funds for the dam last June, although the Senate had previously authorized them. The dam had been attacked by park conservationists (who claimed it would interfere with the Dinosaur National Monument), and *Newsweek* Columnist Raymond Moley repeatedly criticized the whole project as a waste of public funds both for reclamation and power.

Echoes of the Dixon-Yates controversy over a steam plant to be built by private utilities to provide power for AEC still continue, and will doubtless re-echo in the election year political speeches, despite the fact that the contract was canceled by the AEC after the city of Memphis decided to build its own generating plant and relieve the strain on TVA. Incidentally, the Memphis plan does not seem to be progressing very fast. The controversy has now become a finespun issue as to whether Adolphe H. Wenzel invalidated the contract by acting in a dual capacity—advising both the government and the utilities. Middle South Utilities and Southern Company had already spent in the neighborhood of $3,000,000 on the proposed $107,000,000 steam-generating plant before the contract was canceled, and it is now up to the U. S. court of



Source, Texas Parade.



The six states of Texas, Louisiana, Oklahoma, New Mexico, Kansas and California—having about 93 per cent of the nation's natural gas reserves—account for about 90 per cent of total production.
Source, Texas Parade.

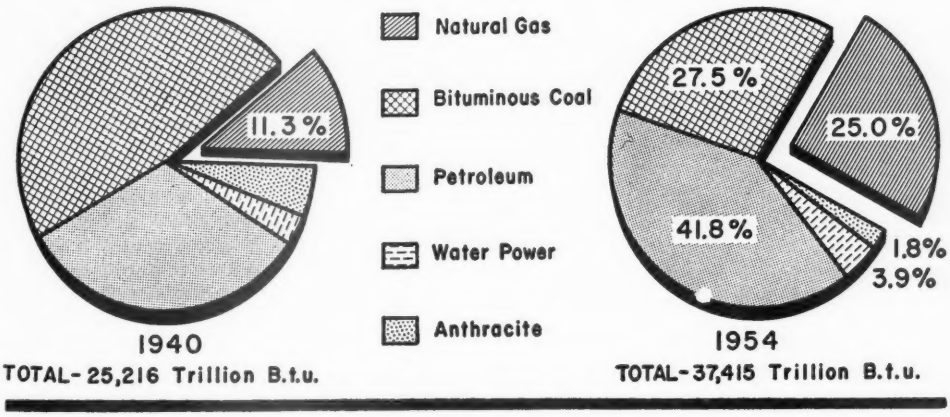
claims to decide whether Mr. Wenzel's actions automatically invalidated the contract before it was officially canceled.

The issue over public power in New York state was discussed in this department recently ("Bogey of Public Power Depresses Stocks of Upstate New York Utilities," PUBLIC UTILITIES FORTNIGHTLY, November 24, 1955, page 878). Since that date, Niagara Mohawk Power and New York State Electric & Gas have agreed to the plan proposed by the New York Power Authority for allocating St. Lawrence power rather than take the issue to the courts. The basic plan prepared by the two utility companies will be carried out, but the authority will build the line to Plattsburg rather than the utilities, while the latter will extend or rebuild their existing facilities to provide alternate power transmission routes. Presumably this compromise helped the utilities obtain a recent tentative allocation of 143,000-kilowatt firm and 37,000-kilowatt interruptible power from St. Lawrence by the authority. (Total power is 735,000-kilowatt firm and 125,000-kilowatt interruptible.) Meanwhile, the issue over construction of the big Niagara plant remains unresolved, and will doubtless be one of the public power issues in the 1956 campaign oratory.

Financial Aspects of Natural Gas Bill Fight

As earlier expected, Senator Lyndon Johnson is making an all-out effort to get the Fulbright Bill (which differs only slightly from the Harris Bill, already passed by the House by a 209-203 vote) through the Senate, and thus avoid utility-type regulation of the independent gas producers which might otherwise result from the U. S. Supreme Court's interpretation of the Federal Power Act in 1954.

Those in favor of the bill assert that (1) regulation is discouraging speculative



Natural gas and petroleum are providing an increasing portion of the nation's energy demands. Meanwhile coal has lost the domination it held until a couple of decades ago.

drilling, necessary to replenish reserves; (2) that changes in the original bill permit FPC curbing of any future excesses under the famous price-escalator contract clauses; and (3) that increases in the field prices would have to be very large to have any substantial percentage effect on retail prices. There is also some implication that eastern retailers are getting too big a percentage of the rates charged consumers. Thus it is alleged (see chart on page 108) that in New York the gas producer gets only 8 cents of the $2.08 paid by the consumer, while the pipeline gets 23 cents and the distributor $1.77.

There seems to be some truth in the statement that reserves have not increased fast enough, though this may not make allowance for Canadian and Mexican reserves. Estimated proven reserves of natural gas at the end of 1954 approximated 212 trillion cubic feet, while 1955 production was probably well in excess of 10 trillion cubic feet. Thus at the present rate of production reserves would last about twenty-one years. A decade ago, at the end of World War II, reserves were 148 trillion and 1946 production approximated 5 trillion, indicating an average life of nearly thirty years. While production about doubled in the postwar period, reserves have increased only about 43 per cent and the increase in 1954 was negligible. Data on drilling results for 1955 are not yet available.

The New York State Public Service Commission recently entered the fray, sending a statement to Senators Lehman and Ives. According to the commission, one producer is planning an immediate increase to 25 cents per Mcf and to 30 or 40 cents in the foreseeable future. Producer prices now range from 17 to 21 cents, the commission indicated, although these figures probably refer to recent field prices rather than the lower average rates under long-term contracts, such as the 8 cents for New York city shown in the chart. Each penny of increase, the commission stated, would raise the value of the nation's gas reserves by $2 billion.

The paramount interest of Texas and other southern states in the bill is indicated in the map on page 109 showing that five southern states and California own about 93 per cent of reserves.

DATA ON ELECTRIC UTILITY STOCKS

1954 Rev. (Mill.)			*12/28/55 Price About*	*Div. Rate*	*Current Yield*	*Share Earnings* Cur. Period*	*% Increase*	*12 Mos. Ended*	*Price-Earns. Ratio*	*Dividend Pay-out*	*Common Stock Equity*
$230	S	Amer. Gas & Elec.	49	$2.00h	4.1%	$2.94**	22%	Oct.	16.7	68%	32%
35	O	Arizona Pub. Serv.	23	1.00	4.3	1.38	D7	Oct.	16.7	72	28
9	O	Arkansas Mo. Power	24	1.24	5.2	1.65	5	Sept.	14.5	75	30
27	S	Atlantic City Elec.	28	1.20b	4.3	1.52	12	Oct.	18.4	79	27
107	S	Baltimore G. & E.	34	1.60	4.7	2.06	36	Sept.	16.5	78	40
5	O	Bangor Hydro-Elec.	33	1.80	5.5	2.11	D11	Sept.	15.6	85	33
4	O	Black Hills P. & L.	26	1.28	4.9	2.16	7	Oct.	12.0	59	26
86	S	Boston Edison	56	2.80	5.0	3.12	5	Dec.	17.9	90	53
17	A	Calif. Elec. Power	14	.70	5.0	.93	21	Sept.	15.1	75	35
17	O	Calif. Oreg. Power	32	1.60	5.0	2.02	19	Aug.	15.8	79	37
7	O	Calif.-Pacific Util.	29	1.40	4.8	2.20**	4	Oct.	13.2	64	30
54	S	Carolina P. & L.	25	1.10	4.4	1.68	18	Nov.	14.9	65	32
23	S	Cent. Hudson G. & E.	16	.76	4.8	1.08	24	Sept.	14.8	70	33
16	O	Cent. Ill. E. & G.	27	1.20	4.4	2.02	44	Sept.	13.4	59	33
30	S	Cent. Ill. Light	52	2.20	4.2	3.36	8	Nov.	15.5	65	40
46	S	Cent. Ill. P. S.	29	1.40	4.8	2.29	26	Sept.	12.7	61	33
10	O	Cent. Louisiana Elec.	30	1.40	4.7	1.78	27	Sept.	16.9	79	31
30	O	Cent. Maine Power	24	1.40	5.9	1.80	18	Nov.	13.3	78	32
105	S	Cent. & South West	36	1.40	3.9	2.00	17	Sept.	18.0	70	36
10	O	Cent. Vt. P. S.	16	.92	5.8	1.31	12	Nov.	12.2	70	29
95	S	Cincinnati G. & E.	28	1.20	4.3	1.79	9	Sept.	15.6	67	38

1954 Rev. (Mill.)		(Continued)	12/28/55 Price About	Div. Rate	Current Yield	Share Earnings* Cur. Period	% Increase	12 Mos. Ended	Price-Earns. Ratio	Dividend Pay-out	Common Stock Equity
6	O	Citizens Utils.	16	.48h	6.0a	1.08	6	June	14.8	44	40
91	S	Cleve. Elec. Illum.	38	1.60	4.2	2.29	17	Sept.	16.6	70	42
3	O	Colo. Cent. Power	27	1.20	4.4	1.58	—	Sept.	17.1	76	39
35	S	Columbus & S. O. E.	32	1.60	5.0	2.15	15	June	14.9	74	34
310	S	Commonwealth Edison	41	2.00	4.9	2.82	11	Sept.	14.5	71	49
10	A	Community Pub. Serv.	23	1.20	5.2	1.78	10	Sept.	12.9	67	49
2	O	Concord Electric	41	2.40	5.9	2.64	6	Dec.	13.5	91	63
60	O	Connecticut L. & P.	18	.98	5.4	1.12	3	Nov.	16.1	88	38
19	O	Connecticut Power	41	2.25	5.5	2.92	40	Sept.	14.0	77	41
474	S	Consol. Edison	47	2.40	5.1	3.06	5	Sept.	15.4	78	43
170	S	Consumers Power	49	2.20i	4.5	3.16	7	Nov.	15.5	70	42
61	S	Dayton P. & L.	45	2.20	4.9	3.24	12	Sept.	13.9	68	37
31	S	Delaware P. & L.	40	1.50	3.8	2.25	9	Sept.	17.8	67	35
196	S	Detroit Edison	36	1.80	5.0	2.41	20	Nov.	14.9	75	45
113	A	Duke Power	57	2.40	4.2	3.42	7	Sept.	16.7	70	53
81	S	Duquesne Light	34	1.80	5.3	2.25	5	Sept.	15.1	80	35
27	O	Eastern Util. Assoc.	35	2.20	6.3	2.47	8	Oct.	14.2	89	36
2	O	Edison Sault Elec.	17	.80	4.7	1.18	22	Sept.	14.4	68	49
10	O	El Paso Elec.	39	1.80	4.6	2.33	2	Aug.	16.7	77	37
10	S	Empire Dist. Elec.	30	1.60	5.3	2.05	D3	Sept.	14.6	78	31
4	O	Fitchburg G. & E.	51	3.00	5.9	3.26	16	Dec.	15.6	92	53
38	S	Florida Power Corp.	43	1.60	3.7	2.15	11	Sept.	20.0	74	33
79	S	Florida P. & L.	37	1.20	3.2	1.93	27	Sept.	19.2	62	38
163	S	General Pub. Util.	37	1.80	4.9	2.61	6	Sept.	14.2	69	39
6	O	Green Mt. Power	32	1.80	5.6	2.33	13	Sept.	13.7	77	39
47	S	Gulf States Util.	37	1.60	4.3	2.16	14	Nov.	17.1	74	30
20	A	Hartford E. L.	57	2.75	4.8	3.18	D6	Sept.	17.9	86	47
5	O	Haverhill Elec.	41	2.15†	5.2	1.95	D35	Dec.	21.0	110	100
58	S	Houston L. & P.	42	1.40	3.3	2.45	10	Nov.	17.1	57	40
7	O	Housatonic P. S.	22	1.40	6.4	1.58	20	Dec.	13.9	89	46
23	S	Idaho Power	32	1.20	3.8	1.82	3	Sept.	17.6	66	35
70	S	Illinois Power	54	2.60	4.8	3.35	25	Oct.	16.1	78	35
37	S	Indianapolis P. & L.	28	1.40	5.0	1.92	20	Sept.	14.6	73	35
18	S	Interstate Power	14	.74	5.3	1.00	5	Sept.	14.0	74	30
27	O	Iowa Elec. L. & P.	27	1.30	4.8	1.93	9	Nov.	14.0	67	33
31	S	Iowa-Ill. G. & E.	34	1.80	5.3	2.25	13	Oct.	15.1	80	40
31	S	Iowa Power & Lt.	27	1.40	5.2	1.89	10	Sept.	14.3	74	31
27	O	Iowa Pub. Service	16	.80	5.0	.91	D2	Oct.	17.6	88	33
12	O	Iowa Southern Util.	22	1.20	5.5	1.62	18	Oct.	13.5	74	35
51	S	Kansas City P. & L.	40	1.80	4.5	2.35	11	Nov.	17.0	77	32
25	S	Kansas G. & E.	25	1.20	4.8	1.93	D4	Nov.	13.0	62	26
36	S	Kansas Pr. & Lt.	22	1.20	5.5	1.58	—	Sept.	13.9	76	26
35	O	Kentucky Util.	26	1.28	4.9	2.10	13	Sept.	12.4	61	34
6	O	Lake Superior D. P.	23	1.10	4.8	1.49	5	Sept.	15.4	74	37
5	O	Lawrence Elec.	30	1.75	5.8	1.40	D25	Dec.	21.4	125	63
77	S	Long Island Ltg.	21	1.00	4.8	1.37**	8	Sept.	15.3	73	32
41	S	Louisville G. & E.	50	2.00	4.0	3.49	24	Sept.	14.3	57	35
7	O	Lowell Elec. Lt.	58	3.30†	5.7	3.04	D19	Dec.	19.1	109	65
8	O	Lynn G. & E.	29	1.60	5.5	2.01	D7	Dec.	14.4	80	75
7	O	Madison G. & E.	44	1.60	3.6	3.20	2	Dec.	13.8	50	53
3	A	Maine Pub. Service	17	1.08	6.4	1.31	—	Oct.	13.0	82	35
4	O	Michigan G. & E.	44	1.50h	6.4a	3.51	14	Sept.	12.5	43	31
144	S	Middle South Util.	31	1.50	4.8	2.18	2	Oct.	14.2	69	35
24	S	Minnesota P. & L.	28	1.40	5.0	2.07	21	Nov.	13.5	68	35
2	O	Miss. Valley P. S.	30	1.40g	4.7	2.48	—	Nov.	12.1	56	30
10	A	Missouri Pub. Ser.	13	.60	4.6	.83	D9	Oct.	15.7	72	29
5	O	Missouri Util.	26	1.36	5.2	1.91	12	Sept.	13.6	71	36
31	S	Montana Power	43	1.80	4.2	2.95	13	Nov.	14.6	61	34
122	S	New England Elec.	17	1.00	5.9	1.22	4	Sept.	13.9	82	34
38	O	New England G. & E.	17	1.00	5.9	1.38**	4	Nov.	12.3	72	35
43	O	New Orleans P. S.	45	2.25	5.0	2.66	D6	Oct.	16.9	85	39
2	O	Newport Electric	43	2.00	4.7	2.63	—	Nov.	16.3	76	34
73	S	N. Y. State El. & Gas	40	2.00	5.0	3.02	17	Oct.	13.2	66	36
210	S	Niagara Mohawk Pr.	33	1.80	5.5	2.15	5	Oct.	15.3	84	34
68	O	Northern Ind. P. S.	35	1.80	5.1	2.80	20	Nov.	12.5	64	35
118	S	Northern Sts. Power	18	.90	5.0	1.11	5	Sept.	16.2	81	33
9	O	Northwestern P. S.	15	.90	6.0	1.39	16	Sept.	10.8	65	27

1954 Rev. (Mill.)		(Continued)	12/28/55 Price About	Rate Div.	Cur. Yield	Share Earnings* Cur. Period	% Increase	12 Mos. Ended	Price-Earns. Ratio	Dividend Pay-out	Common Stock Equity
110	S	Ohio Edison	51	2.48	4.9	3.53	18	Nov.	14.4	70	42
40	S	Oklahoma G. & E.	37	1.70	4.6	2.28	18	Nov.	16.2	75	30
14	O	Otter Tail Power	29	1.60	5.5	2.07	6	Oct.	14.0	77	35
386	S	Pacific G. & E.	49	2.20	4.5	3.22	15	Sept.	15.2	68	39
40	O	Pacific P. & L.	28	1.48	5.3	1.66	8	Aug.	16.9	89	29
109	S	Penn Power & Lt.	48	2.40	5.0	3.07	6	Oct.	15.6	78	29
196	S	Phila. Elec.	39	1.80	4.6	2.30	3	Oct.	17.0	78	39
29	O	Portland Gen. Elec.	24	1.10	4.6	1.64	17	Oct.	14.6	67	40
52	S	Potomac Elec. Power	22	1.00	4.5	1.34	24	Oct.	16.4	75	36
63	S	Pub. Serv. of Colo.	46	1.80	3.9	2.55	18	Sept.	18.0	71	35
250	S	Pub. Serv. El. & Gas	33	1.80	5.5	2.19	16	Sept.	15.1	82	31
62	S	Pub. Ser. of Indiana	39	2.00	5.1	2.40	2	Oct.	16.3	83	34
23	O	Pub. Serv. of N. H.	18	1.00	5.6	1.23	18	Nov.	14.6	81	33
10	O	Public Serv. of N. M.	14	.68	4.9	.95	13	Sept.	14.7	72	31
21	S	Puget Sound P. & L.	23	1.20	5.2	1.49	14	Oct.	15.4	81	58
49	S	Rochester G. & E.	45	2.24	5.0	3.34	7	Sept.	13.5	67	32
14	O	Rockland L. & P.	18	.60	3.3	.83	36	Dec.	21.7	72	29
7	S	St. Joseph L. & P.	23	1.32	5.7	1.67	—	Sept.	13.8	79	41
39	S	San Diego G. & E.	19	.80	4.2	1.11	—	Oct.	17.1	72	44
8	O	Sierra Pacific Pr.	23	1.12	4.9	1.46	23	Oct.	15.8	77	28
154	S	So. Calif. Edison	52	2.40	4.6	3.17	19	Sept.	16.4	76	36
34	S	So. Carolina E. & G.	19	.90	4.7	1.38**	3	Sept.	13.8	65	28
6	O	Southern Colo. Pr.	15	.70	4.7	1.25	3	Aug.	12.0	56	41
194	S	Southern Company	20	.90	4.5	1.32	12	Nov.	15.2	68	29
14	S	So. Indiana G. & E.	30	1.60	5.3	2.21	—	Nov.	13.6	72	34
4	O	So. Nevada Power	21	.80	3.8	1.46	D2	Sept.	21.2	55	64
1	O	Southern Utah Pr.	15	1.00	6.7	.88	1	Oct.	17.0	114	39
3	O	Southwestern E. S.	21	1.08	5.1	1.63	2	Nov.	12.9	66	31
33	S	Southwestern P. S.	28	1.32	4.7	1.53	2	Oct.	18.3	86	30
20	A	Tampa Elec.	26	1.00	3.8	1.34	9	Oct.	19.4	75	38
117	S	Texas Utilities	37	1.28	3.5	2.04	6	Nov.	18.1	63	36
35	S	Toledo Edison	15	.70	4.7	1.08	17	Sept.	13.9	65	30
11	O	Tucson G. E. L. & P.	29	1.20	4.1	1.72	16	June	16.9	70	40
114	S	Union Elec. of Mo.	29	1.40	4.8	1.69	5	Sept.	17.2	83	36
28	O	United Illuminating	50	2.55†	5.1	3.13	8	Dec.	16.0	81	51
4	O	Upper Peninsula Pr.	29	1.50	5.2	2.21	D10	Sept.	13.1	68	31
32	S	Utah Power & Lt.	51	2.20	4.3	3.06	16	Nov.	16.7	72	41
96	S	Virginia E. & P.	41	1.60	3.9	2.54	19	Nov.	16.1	63	36
23	S	Wash. Water Power	38	1.80	4.7	2.04	8	Nov.	18.6	88	35
116	S	West Penn Elec.	27	1.30	4.8	2.02	10	Oct.	13.4	64	28
64	O	West Penn Power	52	2.40	4.6	3.22	11	Sept.	16.1	75	33
10	O	Western Lt. & Tel.	33	1.80	5.5	2.69	40	Oct.	12.3	67	27
22	O	Western Mass. Cos.	40	2.20	5.5	3.00	6	July	13.3	73	52
88	S	Wisc. El. Pr. (Cons.)	33	1.60	4.8	2.42	12	Sept.	13.6	66	39
35	O	Wisconsin P. & L.	25	1.28	5.1	1.71	14	Sept.	14.6	75	32
31	S	Wisconsin Pub. Serv.	22	1.10	5.0	1.69	14	Oct.	13.0	65	34
		Averages			4.9%				15.3	74%	
		Foreign Companies									
186	S	American & Foreign Pr.	14	$ .75e	5.4%	$1.94	D19%	June	7.2	39%	48%
137	A	Brazilian Trac. L. & P.	7	—	—	1.26	D6	Dec.	5.6	—	70
59	A	British Columbia Pr.	37	1.20	3.2	1.62	16	Dec.	22.8	62	28
16	A	Gatineau Power	30	1.20	4.0	1.99	12	Dec.	15.1	60	30
10	A	Quebec Power	28	1.20	4.3	1.56	20	Dec.	17.9	77	44
45	A	Shawinigan Water & Pr.	68	1.80	2.6	2.84	25	Dec.	23.9	63	35

B—Boston Exchange. A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. D—Decrease. *If additional common shares have been recently offered, earnings are adjusted to give effect to the offering. Percentage change is in the net income available for common stock. **Based on average number of shares. a—Also regular annual 3 per cent stock dividend, which is included in the yield. b—Also 5 per cent stock dividend. c—Also 3/10 share of Northern Illinois Gas for each share of Commonwealth Edison. e—Includes 15 cents extra. g—Also 10 per cent stock dividend January 31, 1955. h—Also 2 per cent stock dividend. i—Also 5 per cent stock dividend. †Estimated. #Also occasional stock dividend.

What Others Think

Rising Costs in the Gas Distribution Industry

ECONOMICS of the natural gas industry have received much attention this past year, not only in Congress but in the press. In fact, perhaps the dominant question before the Interstate Commerce committees of both houses of Congress during hearings last spring on the Harris and other bills proposing amendments to the Natural Gas Act, revolved around the cost of gas to the ultimate consumer. How would exemption of gas producers from regulation affect that cost?

It is not the purpose of E. J. McConnell, head of the gas department of Stone & Webster Service Corporation, to discuss the relative merits of the arguments presented at that time: He devotes the major part of his article in the December issue of *American Gas Journal,* entitled "Gas Distribution Management Has Many Problems Ahead," simply to present considerations in the economics of gas distribution which tend to affect the cost of gas.

Whether or not producer and pipeline prices are minor elements in the total cost of gas to the consumer, as testimony and advertisements have purported to show, Mr. McConnell has still found it necessary to give thought to matters so fundamental to the gas-distributing business as an adequate gas supply and its cost. He remarks that since the range of revenues for one unit of gas was the subject of so much discussion in Congress and did receive wide publicity last year, it may be worth while to look at the picture from the gas distribution point of view, and particularly from the point of view of management.

WHAT are the problems that face the officers and directors of gas-distributing companies today? On this point, Mr. McConnell states:

> . . . Broadly, they are related to the rising costs of gas, labor, and construction. The gas-distributing industry is not alone in this respect, for the economy of the United States as a whole seems to be based on rising prices at present and for the foreseeable future. Let us look at the markets for natural gas and then at the factors of cost of gas, labor, and construction.
>
> The expanding market for natural gas is a result largely of changing price relationships of natural gas with other fuels, chiefly coal and oil. The postwar rises in the cost of coal and oil and technological advancements in the science of long-distance gas transmission made the use of natural gas in the industrial East and other previously unconnected areas economically feasible, and several new great transmission systems came into being.

The manufactured gas industry in the post World War II period has become subject to two forces, rising wage and fuel costs, which threatened to price manufactured gas out of the market and seriously affected the earnings and credit of those companies. The markets of the manufactured gas utilities were principally residential and commercial where the advantages of cleanliness, reliable supply, and ease of handling were important. During 1948, the peak year for manufactured gas sales, only 16 per cent of the volume of sales was for industrial purposes. Although the industries were large users of fuel in the form of coal and oil, they could provide their own heating needs more economically by burning coal and oil directly than by purchase of manufactured gas from the distributing utility. The industrial uses of manufactured gas were chiefly for processing.

THE availability of natural gas, as Mr. McConnell points out, was a great boon to the manufactured gas industry. Since residential and commercial customers were the principal business of the manufactured gas industry, gas space heating, when competitive, provided a new large-volume load. The introduction of natural gas in large volumes, when competitive in price, permitted the distributing utility to serve large commercial and industrial loads not only on a year-round basis but also on a dump or interruptible basis during the several months of the year when the space-heating customers do not require service.

But natural gas is in great demand only in those areas where it is competitive in price. As the writer notes, in the areas distant from the gas fields, such as New England and New York, substantial increases in the price of natural gas since its introduction, have dampened these hopes severely and now many observers believe that natural gas may soon be priced out of the market.

It is obvious, the writer maintains, that the cost of transporting natural gas is almost a direct function of the distance transported. A look at the tariffs, he says, will bear this out: Gas at 100 per cent load factor selling for roughly 20 cents in the South and Southwest averages 47 cents in New England; at 66 per cent load factor, the New England price averages 55 cents, and at a space-heating load factor of 25 per cent it would be 92 cents. Peak shaving economies might reduce the composite cost for heating gas to the order of 80 cents.

WITH No. 2 fuel oil selling at 14 cents per gallon, the equivalent gas price is $1.12 per Mcf as compared to a bare gas cost of 80 cents. After the operating costs and fixed charges of distribution are considered, Mr. McConnell feels that there is little, if any, margin left to undersell the competition and, therefore, heating is being sold on a "premium" basis. He adds:

> The trend of natural gas costs is clearly defined, upward. Regardless of what form the regulation of gas producers may take, natural gas in the field is no longer cheap and new purchase commitments are being made at successively higher prices.
>
> The gas-distributing utilities appearing before Congress in support of regulation of the gas producer attacked the various forms of "favored nation" clauses, price redetermination clauses, spiral escalation clauses, and any form of such clause other than periodic fixed price increase escalation and tax increase adjustment clauses. They contended that it is virtually impossible for any of the distributing companies to

form any adequate idea of what their natural gas costs will be in the immediate future. During the course of the congressional hearings the phrases "triggering" and "wild card" were frequently used to illustrate the effect of these clauses on the cost of gas.

Added to the regulatory lag caused by commission and court litigation of pipeline rates at the city gate, will be another regulatory lag in setting the rate from producer to the pipeline. The latter is bound to occur whether the Natural Gas Act stands as interpreted by the United States Supreme Court in the Phillips decision or whether the Congress amends the act.

The road ahead will be a long and uncertain one in regard to the cost of natural gas to the distributing utility. It will take sound judgment and careful planning by the utility to ride out this period of uncertainty which lies in the immediate future.

THE author includes statistics to show that the price of No. 2 fuel oil for residential purposes in December, 1950, was almost double that of December, 1941. But he says that, contrary to the general opinion, these prices have risen very moderately since then, and that prices stay at about the same level throughout the country. In the view of Mr. McConnell such figures go far to explain why in the Chicago and Detroit areas there is still a large unsatisfied demand for gas for space heating. Natural gas is still being delivered to those areas at prices that permit sale to the consumer competitively with oil and coal, so that the consumer can pay for the conversion of his heating equipment in about three years with his fuel savings.

Other statistics introduced show that coal and oil prices for large volume users have been steady for several years and reflect no important increases. Gas, on the other hand, has increased in price each year.

The writer feels that because of the high investment in plant, gas transmission lines must make every attempt to operate at high load factors. Pipeline rates reflect this principle in their two components, demand charges and commodity charges. Load factor economics are held by the writer to be equally important to the distributing utility. Space-heating loads have a load factor of approximately 25 per cent and although few distributing utilities are purchasing gas at this low load factor, new increments of space-heating loads are nevertheless on this basis.

THOSE distributing companies which have industrial markets available to them so that their load factors can be improved through the sale of seasonal interruptible or dump gas, may not necessarily have the solution to their problems. The author cites the situation as it might exist in a New England company. It may have improved in purchase load factor for heating sales from 25 to 33 per cent by peak shaving. Assuming that there is a large enough interruptible market available to buy natural gas on a 100 per cent load factor, then for every cubic foot of heating gas sold, there can be sold two cubic feet of interruptible gas. Other figures show that industrial coal and oil sell for an equivalent of about 36 cents, or about three cents above the commodity cost. If gas can displace the other fuels at 36 cents, the three-cent spread could reduce the heating gas cost by six cents, or bring it down to 74 cents, if we make the assumption that all of the profit in the interruptible sales would accrue to the benefit of the heating sales.

Mr. McConnell goes on:

If the sale of "valley" gas is made by large additions to plant for this specific purpose, then the distributing utility must be aware of the great risk involved in taking on this business. The utility has entered the open competitive fuel market and the arrangement may terminate suddenly and abruptly when the purchaser finds he can switch again to another fuel

The utility cannot use 30-, 40-, or 50-year life of mains and other facilities in computing the economics of going after this type of business. Rather it must use virtually the same short period of time that the interruptible customer used to determine whether or not it is economical for him to add gas-burning equipment. His economics probably depend on recovery of his new investment in as short a period as three years.

WHAT then can a gas-distributing utility do to minimize the effects of demand charges and low load factors, the author asks? He replies:

. . . In the long run, the best answer is found in careful load development based on the "premium" fuel characteristics of natural gas and its year-round use. Every effort should be made to promote the other uses of gas in the home and commerical establishments in addition to space heating.

Just as the one appliance customer was the bane of the manufactured gas industry, so can the space-heating customer alone be the bane of the natural gas industry. The distributing utilities are eagerly awaiting the development of suitable gas air-conditioning equipment since such would be an obvious and welcome complement to the winter space-heating loads.

Another important means of improving the load factor of purchases from the pipeline, especially, the author says, where "take or pay for" provisions are included in the tariff, is peak shaving. Many companies formerly manufacturing water gas have converted their sets to the manufacture of high Btu oil gas. In the author's view, on the East coast, there are grounds for the belief that new oil-gas manufacturing facilities can be installed on a competitive basis with natural gas in those areas, not only for peak shaving but for base loads.

The writer suggests that, for some companies, the purchase of gas storage service is practical. For others the development of their own natural gas storage may be a good solution where depleted gas wells or suitable underground formations exist. The storage of natural gas under high pressure in steel pipe is another method.

On the other hand, the use of propane has many adherents, storage being accomplished by tanks above and below ground, and in some cases in underground caverns. The author points out that the development of refrigerated propane storage for large quantities is nearing the practical stage. Of course, a company with no peak shaving facilities starts from scratch in evaluating the economics of the various methods of this type which may be available to it.

UNDER the category of operating expenses, Mr. O'Connell considers all those expenses of operation and maintenance other than the gas supply. He states:

. . . Recognizing that industry averages may be deceiving and that important differences may occur between any two companies because of locations, size of company, different standards as

Courtesy, The (Baltimore) Sun

"YOU'RE ENGAGING IN UNFAIR COMPETITION"

to free service on customer's premises, pension costs, and the many other factors, we find in our analyses of many diverse companies that these expenses are now about $36 per customer.

It does not matter particularly whether the company sells a small volume of gas to the average residential and commerical customer, as do the companies with low space-heating saturation, or whether the company sells large volumes. The cost for a particular company will fall fairly close to this general average. . . . average customer costs . . . developed from the statistics published by the Federal Power Commission . . . shows . . . a story with which we are all familiar, that the cost of doing business has more than doubled since the end of World War II. Payroll and material costs seem destined to continue their upward trend. The wage settlements already granted this year in the automobile, steel, and other industries will as they have in the past, bring about wage increases in all industries including gas.

It suffices to say that all gas managements are concerned with this problem and should give much attention to controlling these expenses consistent with their obligation to render good utility service and to have a loyal, contented, and properly paid utility work staff.

IN the observation of Mr. McConnell, these costs did not receive any particular attention during the course of the congressional hearings last year. Yet, he says, though perhaps obvious, they go a long way to explain the ultimate cost of gas to the consumer.

He writes:

If the domestic customer uses only 30 Mcf per year for cooking and water

heating purposes, then the $36 must be recovered by including $1.20 per Mcf in his bill in addition to fixed charges on investment and the cost of the gas itself. If, however, the customer uses 120 Mcf for all purposes including space heating, then the customer costs average out at 30 cents per Mcf. In 1945 comparable unit costs to sell 120 Mcf were 14 cents per Mcf and in 1950, 21 cents.

WILL cutting rates produce enough new business to offset the loss of revenues on the business already at hand? This is the sort of question that reminds the author of the perennial dilemma "which came first, chicken or egg?" The pricing of gas to the consumer or rate design has been a ticklish problem to management. The rising prices of natural gas, labor, and material have forced many companies not only to forego consideration of rate cuts in order to bring this principle into play, the writer explains, but in many cases to seek relief by raising prices to preserve the financial soundness and credit of the company.

Mr. McConnell believes that a highly significant factor in the economics of the gas-distributing business is the cost of construction or the investment required to serve new gas loads. Costs of installing mains, services, and meters tend to be more than twice those prevailing in 1940. The Stone & Webster official sees no basis for assuming that the immediate future will not be a copy of the recent past: a steady rise in the cost of labor and steel and all other components that go into the building of a gas distribution system. At present, about $300 of new distribution equipment is required to serve a new residential customer. The fixed charges on this investment at 16 per cent for the first year equal $48. This means that if the customer takes gas only for cooking and water heating at the rate of 30 Mcf per year, the rate for this customer alone should include $1.60 per Mcf for fixed charges. If the customer uses 120 Mcf annually, the fixed charges represent only 40 cents per Mcf.

—E.W.P.

Interior Looks toward Elections

THE Secretary of the Interior, Douglas McKay, gave a partial year-end summary of the activities of his department during a speech before the chamber of commerce of Honolulu, Hawaii, December 16th. At the same time, he took a forward look in the direction of the 1956 election. With unminced words, he sought to reformulate the issues, as sometimes posed by public power advocates.

No one denies, he said, that water is one of the most precious of our resources. We face the need to develop in the United States tremendous additional supplies for domestic and industrial uses, as well as for irrigation and hydroelectric power. In this connection, he declared, the President has launched a comprehensive effort to meet the water problem. The goal, as stated, is to make the best use of every drop of water which falls on our soil or which can be extracted from the ocean.

A presidential advisory committee, of which the Interior Secretary is chairman, has been studying the water problem in light of this goal. McKay said the report of this committee would soon be issued, and would, he believed, provide the framework for a far-reaching, long-range attack on the problem, which has now become necessary.

Secretary McKay continued:

Our water problems are so great that they must be approached on a co-operative basis. That is one reason for the development of the partnership policy for water-power development which has been advanced by this administration.

The issue here is not, as you may have heard, public *versus* private power.

There is no such issue before the American people.

Rather, the issue is whether all future water-power developments in the United States, costing many, many billions of dollars, are to be paid for by the federal taxpayer alone, or whether they are to be carried forward by the co-operative efforts of the federal government working with local groups—both public and private.

In my part of the country—the Pacific Northwest—there is a particularly urgent need for new hydro development.

It is estimated that 4,000,000 additional kilowatts will be needed by 1961 and 6,000,000 by 1965.

This will cost about $3 billion over the next ten years.

On the basis of a five-day workweek, this means about $1,000,000 a day for the next decade.

CONGRESS has not shown any inclination to appropriate such a large amount of funds for such purposes, the administration official declared. In the past ten years, Congress has appropriated only about half as much as will be needed in the future. And the outlook in Congress is certainly not likely to become more favorable to increasing the size of such appropriations in the near future.

The Secretary concluded that plainly the partnership between the federal government and local groups is a necessary step if the power needs of the Northwest are to be met on schedule. In his belief, the partnership program has already won widespread support and the expectancy is for giant strides to be made in partnership development of the Pacific Northwest in the coming critical period. In each case, he said, the effort will be not only to end power shortages but to achieve solvency in government and restore individual initiative to the people. "I can tell you flatly," he said, "that we have not given anything away."

Resources under the care of the Department of Interior are priceless assets which belong to all the people, according to Secretary McKay. They are not now, and will not be "given away," under the partnership power program. They will, however, be put to use.

The Dynamic Economics of Prime Power

FEW people in the United States have to work like a horse in the present day. In fact all forms of muscle power have lost their effectiveness in doing the world's work. Mineral energy (from oil, coal, gas) has replaced muscle power for most purposes because of its extremely low cost. Electric energy is delivered at a cost of a penny or two per horsepower-hour; a draft horse—if one can be found—can be hired for $10 a day; while the present rate of $1.25 an hour for common labor means that the least expensive human energy on the basis of one horsepower (equivalent to twenty man power) costs $25 per horsepower-hour. On the whole, animal power probably costs 50 to 100 times as much as "mechanical" power, and man power more than 1,000 times as much.

These and other odd bits of informa-

tion, of both general and special interest to utility people are to be found in a Twentieth Century Fund study by J. Frederick Dewhurst & Associates, entitled "America's Needs and Resources: A New Survey." Or, if there is no time for browsing through an extensive report (more than 1,000 pages), try the 15-page introduction to and condensation of the survey, "Preview 1960." The digest, written by Harland Manchester, and illustrated by John Cosgrave II, contains the essence of what is a 7-year survey projecting the country's present measured industrial and economic strength and needs ahead to 1960.

According to the survey, a new boom in electric power production is in the offing. In 1940 the utilities produced 142 billion kilowatt-hours; in 1950 this total had risen to 400 billion. It is forecast that in 1960 our machines, lights, and household appliances will consume 600 billion kilowatt-hours, and, if the trend continues, 1 trillion by 1970.

Meanwhile, figures show it takes less and less coal, fewer freight cars to haul the coal, and less work to make the same amount of electricity, because of constant improvements in steam-generating plants. In 1900 it took more than seven pounds of coal to make a 100-watt bulb burn ten hours. By 1950, a little more than one pound was needed, and by 1960 many new plants will be in operation which will do the same job on a little mound of coal weighing less than three-quarters of a pound.

How does power use relate to living standards? The survey shows that in 1949 every man, woman, and child in the United States consumed power (mainly from mineral fuels and dams) equivalent to eight tons of coal—more than enough to light five average houses for a year. Few other countries used more than half that amount per person, and it is no accident, the survey says, that per capita income throughout the world roughly corresponds to power use.

According to the study, one of the biggest future "ifs" in the production of electrical energy lies in the progress made in harnessing atomic fuels. Half of all the coal ever used in the United States has been consumed since 1920, the survey reports, and about the same proportions of gas and oil ever consumed have been burned since 1940. When the remaining fuels become too costly to extract, it will be necessary to use other power sources. But the digest states that it would be a mistake to assume that atomic power will be much cheaper. It can only replace the firebox, the major costs of transmitting and distributing electricity remaining unchanged by use of the new kind of fuel.

The digest also notes other technical developments, only partially ripened after long research. By 1960, it predicts, solar energy may look like a large-scale possibility. More remote, but still being considered, is the harnessing of the H-bomb principle of hydrogen fusion for peacetime power. But almost immediate in its wide-scale use, the survey expects, will be the "heat pump" so that houses may economically be heated with electric power. Many units are already in use, the digest shows, and by 1960 the new heater is likely to be on the verge of a real boom.

Is the Public Power Advocate a Socialist?

Not long ago, someone asked the American Socialist *par excellence*, Norman Thomas, to relate the public power views of such Senators as Morse

and Neuberger (both Democrats, Oregon) to his own ideas of Socialism. Were they birds of one feather, in other words?

In his reply, printed in the Portland *Oregonian,* Mr. Thomas made this distinction:

> Socialists have always believed in public power. But advocacy of public power doesn't make a man—or a Senator—a Socialist. Particular proposals for public power . . . should be judged on their merits.
>
> Ever since Senator George Norris of Nebraska, nominally a Republican, introduced TVA legislation, I have praised it, and later the Rural Electrification Administration, as the finest single economic accomplishment of the Roosevelt administration.
>
> More times than I can remember I have urged the extension of river valley authorities throughout the country. Two disastrous Missouri valley floods might have been averted or their immense damage greatly lessened had the quarreling states and their people, some of them hypnotized by the costly and dishonorable private power propaganda, urged on Congress an MVA.

However, Socialist Thomas wrote, TVA should not everywhere be slavishly copied. Socialists, he said, have urged that consumers, especially farmers concerned with irrigation, and workers should be represented on the authorities.

Striking a more personal note, he continued:

> In 1950, I think, I was invited to discuss a Columbia River Valley Authority in symposiums in Oregon and Washington. I took part in a Seattle symposium but none in Oregon. Senator Morse was also invited, but he, not yet having discovered that he was a Democrat, was facing the Republican primaries. He emphatically refused to appear with me, explaining that he was no Socialist and was opposed to a Columbia River Valley Authority, mostly in the name of states' rights.

MR. THOMAS stated that he was never sure whether Senator Morse wanted a treaty between states to set up public or private ownership or "partnership." But by this time, Thomas wrote, perhaps he has a comprehensive program which he has explained, "at least to his colleague, the public power crusader, Senator Neuberger.

"I heartily support the latter's opposition to all phony partnership plans by which Republicans want to make the Columbia work for the private profits of utility magnates who usually support Republican campaigns."

Thomas said he favors federal authorities since most American rivers involve navigation problems, constitutionally the business of the federal government, and since the states with claims on the waters of the great rivers are chronically quarreling. He cited as the worst examples of state feuding, those of the Colorado and Missouri valley areas. Federal authority should show "due consideration for the states concerned."

Another good which could be brought by the use of federal authority, Mr. Thomas felt, but without giving any explanation, would be to end the quarrels between the Army Engineers and the reclamation service. This, he said, would be good Socialism, good Americanism, and good common sense.

Could Co-op Gain by Paying Full Taxes?

IN the spirit of constructive self-criticism, R. Powers Luse, manager of the Hancock-Wood Electric Co-operative of North Baltimore, Ohio, recently listed ten weaknesses of electric co-ops, which he said the co-ops might well correct to good advantage. Point 7, pertaining to taxes, will be of special interest. His wry appraisal of the general co-operative situation and procedure, while unmarked by any indication of "agonized reappraisal," may well be appreciated. As found in the October issue of *Co-op Power*, these are the ten "co-op weak points" on Mr. Luse's list, with such explanation as he has seen fit to give:

(1) The Concept That "Debt Is Sin."

This concept is very deeply rooted in the minds of many co-op directors and managers and probably relates back to farm mortgages and the 1930-39 depression. The unfortunate thing is that these directors and managers do not grasp the essential differences between private and corporate debt. They have never learned that a corporation is always "in debt" and will not and cannot get "out of debt." This lack of comprehension leads to policies of excessive rates, poor service, and poor equity systems, aimed at hasty achievement of an impossible goal.

(2) Trees.

(3) Poor Equity Systems.

One of the most fundamental principles of co-operatives is that "margins shall be distributed to patrons in proportion to patronage." Instead of obeying that simple rule in a relaxed and reasonable manner, many co-ops have arrived at strained, unreasonable, lazy, illegal, and unbelievable solutions to their equity problem.

(4) Elderly Directors. . . .

(5) Power Company Policies.

Obviously power companies do not have an overwhelming love for the co-ops in their midst. It may safely be presumed that the taking over by purchase or otherwise of the electric co-ops in their area is a prime objective of most power companies. The companies have some smart and very high-priced talent at their disposal and their opposition and skilled attacks against co-ops will be an eternal threat to their continued existence.

(6) Cheap Management.

Poorly paid management for co-operatives is too often the rule rather than the exception. Cheap management is like cheap gas for your single engine airplane.

(7) Failure to Accept Federal Income Tax Responsibility.

Taxpayers dislike potential taxpayers who, for whatever reason, escape tax paying. No amount of brilliant explaining will ever make an income tax-burdened public respect income tax-exempt co-operatives. This dislike can easily be translated into unfavorable legislation.

(8) Dependence on Power Companies for Power Supply.

Short-term contracts with antagonistic private companies hardly give co-ops any great security.

(9) Failure to Educate the Public.

At least 95 per cent of all city people know very little about electric co-ops. What little they think they know are these misconceptions: (a) Co-ops are government-subsidized "REA's"; (b) co-ops are pampered with paternalistic "preference"; (c) co-ops are nontax-

paying. This public ignorance is ready-made trouble for co-operatives in the hands of the unscrupulous politician. Many co-op board members do not realize the terrible urgency of good public relations.

(10) Failure to Support Research.

Research is basic to survival and progress. Most co-op people are so obsessed with their "debt is sin" philosophy that the idea of spending a few cents per consumer per year on research seems to them a silly luxury.

HAVING found only these listed co-op weaknesses, Mr. Luse quotes Disraeli to the effect that "to be conscious that you are ignorant is a great step to knowledge." Mr. Luse would paraphrase that statement by saying, "to be aware of our weaknesses is a great step toward strength."

Notes on Recent Publications

FPC ISSUES STATISTICS. The Federal Power Commission has announced the issuance of the 1954 edition of its annual publication "Statistics of Natural Gas Companies."

The report contains, for individual companies, detailed financial and operating information in the form of statements of the balance sheet; income and earned surplus statements; gas operating revenues, customers, and sales; capital stock and long-term debt; gas operating expenses; gas utility plant; gas accounts; and data on physical property and number of employees.

Information contained in the publication was taken from annual reports filed with the FPC by natural gas companies subject to its jurisdiction. The new report provides information on 115 companies. During the year three of these companies were eliminated through merger, leaving 112 in operation at the end of 1954.

Copies of the new publication may be obtained from the FPC, Washington 25, D. C., for $5 each. The order number is FPC S-116.

GREAT LAKES-ST. LAWRENCE SEAWAY PROJECT. Those seeking source material and information on the Great Lakes-St. Lawrence waterway project will be interested in the current issue of "Business Information Sources," the official bulletin of the business information bureau of the Cleveland Public Library, which is devoted to that subject. It consists of 94 references to articles in newspapers, special reports—such as the Buckley Report, magazine articles, government publications, house organs (Federal Reserve Bank of Cleveland, Canadian Bank of Commerce, and others)—as well as other items.

These references are listed under the following headings: Cleveland and the Seaway; Political Background of the Seaway; Commerce on the Great Lakes: Past and Present; Construction Plans and Revenue Estimates; Power and Navigation Aspects; Market and Industrial Potentials.

Copies are available for a mailing and handling charge of 25 cents from the business information bureau, Cleveland Public Library, 325 Superior avenue, Cleveland 14, Ohio.

URANIUM ORE REFINING NOW OPEN TO INDUSTRY. Production of uranium fuels has been opened to private industry thus ending an absolute government monopoly. The Atomic Energy Commission is soliciting proposals from industry to set up and operate plants to concentrate uranium ores. The refined uranium salts would be sold only to the federal government for further processing into reactor fuel. But, for the first time, private industry is placed part way into the business of producing uranium feed materials from high-grade ores. It is not widely known that there are about 160 uranium-bearing minerals, not all of which occur in commercially significant deposits. A 14-color chart correlating these minerals and potential ores has recently been published. Source: Colorado School of Mines Research Foundation, Inc. Golden, Colorado. Price $5 per copy, postage included.

The March of Events

Pipeline Must Pay Refund

THE Federal Power Commission late last month directed Panhandle Eastern Pipe Line Company, Kansas City, to refund within fifteen days $36,116,056, plus interest at 6 per cent annually, to some fifty wholesale users of natural gas in the Midwest.

The refund covers the period from February 20, 1952, through April 30, 1954, when a rate increase was in effect subject to refund of amounts which the commission later found to be excessive. The refund arose from a commission decision issued April 15, 1954, granting Panhandle an increase of $12,778,864 annually instead of $21,400,000 the company had sought and had collected starting February 20, 1952.

Panhandle has about fifty wholesale customers in Kansas, Indiana, Missouri, Ohio, Illinois, and Michigan which will share the refund.

Arkansas

Emergency Rate Boost Plea Rejected

FINDING that the company had no immediate emergency, the state public service commission recently held that the Arkansas Power & Light Company could not put higher rates into effect with its December billings.

The commission based its order denying the plea for emergency relief on testimony which the company had presented in behalf of its application for a total rate increase approximating $5,200,000 annually.

The commission said it found from the direct testimony that AP&L admits that it is earning 4.56 per cent on its rate base, and from the rates which have been in effect since 1944; the company failed to supply figures on how much it costs to serve various classes of customers so that the commission could allocate such costs among the domestic, commercial, and industrial customers; and that certain adjustments would have to be made in AP&L's operating expenses and allowances for depreciation and that these adjustments "will materially increase" the company's admitted rate of return.

The company has paid a 9 per cent dividend on its common stock, which is owned entirely by Middle South Utilities, Inc.

The commission found the company was earning about 8½ per cent on its common stock—not counting the revenue now being collected under bond and without the suggested adjustments—after meeting its obligations on its preferred stock.

California

Commission Survey

INDICATIVE of comparatively lower utility rates in California, an annual survey announced recently by the state public utilities commission shows that again combined monthly charges for gas, electric power, and two-party telephone service in Los Angeles and San Francisco are the lowest among the nation's 25 largest cities.

Comparison was made of monthly bills for typical residential customers, it was explained by Peter E. Mitchell, commission president. The survey was based on use of 50 therms of natural gas, 100 kilowatt-hours of electric energy, and two-party telephone service.

Los Angeles residents' typical combined bill for the three services on June 30th, date of the survey, totaled $10.41, lowest in any of the 25 cities, Mitchell said. San Francisco was second low at $10.77 per month. These were the only two of the 25 cities with a combined bill of less than $11 per month.

PG&E Cuts Rates in Fringe Areas

REDUCTIONS in gas and electric rates amounting to $556,440 a year, for customers in unincorporated areas where population densities have increased, were announced last month by Pacific Gas and Electric Company. The filing of a formal notice with the state public utilities commission brought to $1,000,000 the total in rate reductions for domestic and small commercial customers filed by PG&E with the commission in 1955.

Effective with meter readings this month, 46 sections of northern and central California will enjoy the lower rates —24 for both gas and electricity, 12 for electricity, and 10 for gas. As other domestic and commercial customers are added in these areas they will be put on the new rate schedules. Industrial customers are on different schedules and are not affected. About 49,000 customers will benefit—20,500 electric and 28,500 gas.

Illinois

Rate Increases Filed to Cover Tax

A $1,500,000 annual increase for 1,000,000 customers of Commonwealth Edison Company was filed with the state commerce commission late last month to compensate for a one per cent city utility tax levied on the company, effective January 1st.

Other Chicago utilities have already filed their revised rate schedules with the commission. Under the act, utilities are allowed to pass the tax on to their customers.

Peoples Gas Light & Coke Company on January 1st added 5.6 per cent to the net monthly bills of its customers as the result of the recently enacted city utility tax. The company also has filed with the state commission a supplemental rate schedule for that increase.

The 5 per cent utility tax was authorized by the 1955 legislature.

Kentucky

Utility Workers Reject Union

EMPLOYEES of the western division of Kentucky Utilities Company last month turned down union representation, 152 to 65, in balloting, the firm reported.

The NLRB election covered all division

employees except managers, office workers, and supervisory personnel. The vote was on whether the employees should be represented by the IBEW.

Massachusetts

Tax Abatement Granted

THE chairman of the Springfield Board of Assessors recently announced the granting to the Western Massachusetts Electric Company of abatements on municipal personal property taxes totaling $611,968.48 for a 3-year period. He said the abatement was made after the board was advised by the city solicitor that a court decision overruling the tax appellate board on similar cases involving telephone and telegraph companies made chances of sustaining the electric company's valuation increases "rather slim at this time."

The abatement will not mean a refund from the city to the company, it was explained, since the company had not paid the additional amount involved, pending outcome of an appeal.

New Hampshire

Protests State Franchise Tax

IN paying $437,108 under protest as its 1955 New Hampshire state franchise tax, the Public Service Company of New Hampshire warned in a letter last month to the state tax commission that its electric rates are almost certain to go up again if the tax valuation set by the state survives a court test.

Company President Avery R. Schiller charged in the letter that the tax demanded by the state is "excessive, illegal, and disproportionate in amount."

New York

State Line Building Asked

GOVERNOR Harriman, in his message to the state legislature early this month, raised the possibility of a major political clash over public hydroelectric power at the current legislative session. He asked for amendments to the State Power Authority Law to remove any legal doubt of the authority's right to build its own transmission lines.

In so doing, he embraced the general philosophy of Senator Herbert H. Lehman as to the best method of bringing the benefits of cheap publicly produced hydroelectric power to the largest number of users. This view is that the way to persuade private utilities to lower rates is to threaten to parallel their transmission lines and sell directly to publicly owned distribution systems.

A contrary philosophy has been urged by John E. Burton, a Republican member of the authority.

State Approves Fees for Utility

THE state public service commission recently authorized the New York & Richmond Gas Company to establish basic fees for several types of service for which charges in the past were made on a haphazard basis.

The commission's decision noted that special services or charges were not accorded to all customers and "it may well be that some customers obtained, without charge, benefits far removed from any service connected with supplying gas, to the disadvantage of other customers who had and could have no knowledge of the availability of such extraordinary services."

The new service charges went into effect

on December 31st. The company serves 41,600 customers on Staten Island.

The commission explained that the charges now being authorized "are designed to approximate the cost of the service involved so that calls for special services will be met by the individual concerned and will not be a burden upon other customers not desiring such service."

Fares for Casual Riders Increased

THE state public service commission recently accepted a tariff amendment filed by Rochester Transit Corporation designed to increase fares to casual riders from 15 to 20 cents, effective January 11th. Fares for regular riders, however, will be held at the present 15-cent level through the sale of tokens at six for 90 cents. The only exception is that the special 15-cent fare from points outside the city to the Kodak plant will be raised to 20 cents. No changes in children's, school, or suburban fares are involved.

In seeking the fare increase, the company said that as a result of recent wage increases granted to company employees, it would lose about $218,000 during the next year under present fares.

The company said the wage increases would amount to about $170,000 for the calendar year 1956, but this will be offset to some extent by service reductions. It is expected that the new fares will produce about $86,000 additional revenues annually if the current downward trend in riding continues.

Oregon

Rate Cuts Due

RATE reductions for the Eugene water and electric board's 22,000 customers were approved by the utility's board of directors last month. The new rates will be effective February 1, 1956.

The reductions will average about 8 per cent for residential users and about 13 per cent for commercial and industrial users, according to the assistant superintendent.

The board delayed a discussion on Superintendent Ray Boals' recommendation that Eugene withdraw from the Northwest Public Power Association. One of the board members suggested that the executive secretary of the association be invited to meet with the board before action is taken.

Boals recently charged that the association had departed from its original purpose of exchanging information about better utility operations to engage in public power politics.

Pennsylvania

Power Firm Merger Approved

THE state public utility commission last month granted permission to the Pennsylvania Power & Light Company to merge with the Scranton Electric Company under terms of a joint agreement by which PP&L will take over property and rights of the Scranton firm.

Scranton Electric Company serves 94,500 consumers in Lackawanna, Luzerne, Susquehanna, and Wayne counties.

The commission said the record in the case showed that the merger ultimately will result in annual savings of about $600,000 in operating expenses, and an estimated saving of $4,000,000 in over-all investment costs. The commission added it will result in other savings by elimination of duplicate services in operation and management.

PP&L also will be in a "better position than Scranton to finance such additions and improvements to properties in the Scranton area as may be required in the future," the commission said.

The commission also declared that consolidation of the two firms will "not complicate the rate structure in Scranton's present territory" since PP&L intends to establish a separate Scranton division for rate purposes and accounting.

The city of Scranton had protested the merger on the basis that it might prevent continuance of prevailing lower rates in the Scranton territory.

City Reaches Terms on Gas

THE city and the Philadelphia Gas Works have worked out a new agreement covering costs involved in the removal and reconstruction of gas facilities.

Managing Director Vernon D. Northrop and Thomas S. Lever, general manager of the gas company, said recently the new contract would not become fully effective until work begins on municipal projects scheduled in the 1957 capital budget.

The agreement spells out procedures for allocating costs, which in the past were levied only after negotiations covering each gas main or facility.

Washington

Counties Eye Gas of Future

IN an effort to work out uniform franchise provisions for natural gas pipelines in Washington counties, the state county commissioners association recently named a committee to act on the standards.

Terry T. Grant, chairman of the board of Spokane county commissioners and president of the state association, said Angus McDonald, Yakima, was named chairman of the committee.

Other members are: Art Cox, Walla Walla; C. Tab Murphy, Elma; D. C. Evans, Seattle; William Stancer, Tacoma; Harold Sweet, Yakima; and Clyde Chaffins, Spokane, alternate.

Bus Riders Pampered

EARLY this month the Seattle transit system started providing a free ride, a free newspaper, free flowers, special music, and a shiny Washington state apple to lucky riders.

The "on the house" treatment, designed to "stimulate transit riding," is offered from 6 A.M. to 6 P.M. each week day over different buses on the regular routes.

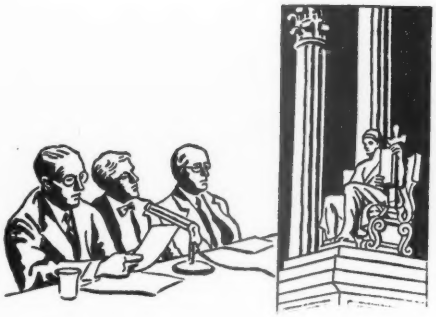
West Virginia

Seeks Electric Rate Increase

AN increase from $1 to $1.50 in minimum monthly rates for residential customers was asked by the Appalachian Electric Power Company in an application filed last month with the state public service commission.

The company estimated the increase would take in about $80,000 more gross annual revenue from about 16,000 of its 233,000 residential customers in southern West Virginia. An additional $30,000 would be raised from about 6,000 of 31,500 small power users, making a total of $110,000.

Other adjustments sought by the company would bring about a decrease of $53,291 in the annual amount paid by commercial and industrial users. The company's total annual gross revenue increase would thus amount to less than $57,000 under the proposed changes.



Progress of Regulation

Trends and Topics

Electric Service to Trailer Parks

THE action of the Delaware superior court in upholding the state commission's approval of rules governing electric service to trailer parks is of general interest because of the extension of these parks, or camps, throughout the country in recent years. Many families live in trailers temporarily, and some permanently. Operators of trailer parks rent space for the trailers, but their occupants are in a different category from home owners. They are, in the words of the Delaware commission, nomadic.

Some operators of trailer camps have installed distribution equipment and meters and have bought electricity for submetering to tenants. Objections to this unregulated service have led to the adoption of rules restricting or prohibiting submetering. This was the case in Delaware, where the commission, after an extensive examination of arguments pro and con, approved a company regulation prohibiting submetering by trailer park operators.

The company had proposed, as one alternative, that a trailer park owner purchase all current through a bulk meter and redistribute it to trailers, but there was to be no submetering. As a second alternative, the company proposed to meter service to each trailer and bill each tenant. The operator could get service at commercial rates for the administrative office and for general park use and transient trailers. The court found no error in the commission's approval of the company's plan, and it also found nothing unreasonable in a requirement that park operators install secondary wiring at their own expense. The unsteady patronage was mentioned as one reason for this decision. *Tweed v. Delaware Pub. Service Commission, October 11, 1955.*

The Colorado commission, in 1949, approved a policy of rendering service directly to each trailer through company-owned meters and billing each meter as a separate customer of the utility, when desired by the owner of a permanent trailer camp unwilling to include electric service in the rental charge (78 PUR NS 54). This was deemed to be fair and equitable in order to preclude improper submetering and reselling by trailer camp owners.

The Wisconsin commission, in 1951, approved a plan for electric service

to trailer camps (91 PUR NS 65). The proposal was to apportion the cost among trailer tenants without any submetering. Tenants, however, would have the option to take service directly from the utility company. The commission had previously considered the question in a case in which it modified regulations of the Wisconsin Electric Power Company to restrict the owners of trailer camps from charging more for submetered energy than tenants would pay under the commercial service rate if served directly by the utility (84 PUR NS 1).

The Michigan commission, in 1952, authorized the Detroit Edison Company to revise its rules with respect to the electric service at trailer parks (96 PUR NS 127). Under the new regulations the operator could purchase energy for resale to tenants provided that energy is separately metered and billed at the residence rate. Provision was also made for testing meters for accuracy.

Ban on Submetering Generally

The underlying problem is not restricted to trailer parks. Disapproval of the practice of submetering of service by unregulated landlords, or others, free from the restraints placed upon public utilities has been expressed by several commissions. Exorbitant charges by overeager middlemen cannot be prevented if this regulatory gap is permitted. Prohibitions against submetering, for example, may be noted in decisions in the District of Columbia (PUR1929B 600; PUR1932C 40), Massachusetts (70 PUR NS 161; 98 PUR NS 427), and New Jersey (PUR1929E 616).

The New York commission, in 1954, adopted a rule prohibiting the submetering of gas and electricity (3 PUR3d 58). The practice was said to be contrary to the public interest. The practice, in the opinion of the commission, serves no useful purpose and it brings with it certain inherent detriment to the consuming public. Complaints had been made as to high bills, incorrect meters, and inability to obtain the return of deposits. Frequently the right to submeter had been farmed out to middlemen. No way was apparent for distinguishing between "good submeterers" and "bad submeterers." The potential of evil was said to be inherent in the practice.

Adoption of this rule culminated a long controversy over submetering (PUR1931C 337; 30 PUR NS 257; 63 PUR NS 297), finally resulting in a court decision upholding the commission's ban on submetering in the Consolidated Edison Company Case (93 PUR NS 53). That decision prompted the commission to request all companies in the state to incorporate in their tariffs prohibitions against the practice, and the general rule was adopted.

Review of Current Cases

Indiana Bell Rate Case Goes Back to Commission

THE Indiana Bell Telephone Company has won another round in its battle for higher rates. This time, the Indiana supreme court affirmed the circuit court's

decision that the commission's latest order had not complied with a previous transmittal order directing the commission to consider certain items of new evidence.

Previously, the commission had been temporarily enjoined from interfering with the company's new rate schedule while the main controversy, with many subsidiary technical points, traveled the rounds of trial and appellate courts, culminating in the refusal of the circuit court to grant a new trial after setting aside the commission's changed order, and the perfection of an appeal by the commission.

Proper rates, said the court, are those which produce a fair and nonconfiscatory return, and such as will enable the company, under efficient management, to maintain its utility property and service to the public, and provide a reasonable return upon the fair value of its used and useful property. The general rule that commission rates are presumed to be lawful and the burden is upon the complainant to show that the determination and order is unreasonable and unlawful was not applicable in this case since the commission's order was made in response to court instruction.

Scope of Judicial Review

The power of courts in actions such as this was summarized as follows: Courts do not have the power to revise or change a schedule of rates imposed by the commission. They do not determine whether one rate is preferable to another, nor do they perform mere ministerial duties. However, they do possess the power and have the duty to inquire whether a schedule of rates prescribed by the commission is unlawful, insufficient, or unreasonable and such as results in a confiscation of property, and, if so found, to restrain their enforcement.

The law is well settled, stated the court, that if there is substantial evidence to support the commission's findings, and if the determination or order is one which the commission has the power to make, courts must uphold it. The law is equally well settled, continued the court, that an order of the commission must be founded upon facts found by the commission and based upon substantial evidence.

Allocation Not Acceptable

Applying such law, the commission finding regarding allocation of the company's property by the "Charleston Method" was not acceptable to the court. There was no evidence in the record concerning or explaining the method, or its formula of classification, or to what properties or expenses it was applied, or how and by what system of allocation or division the fair value of the intrastate property was determined.

The commission could not act on its own independent information and say that it considered the Charleston Method the best yet promulgated. Findings must be based upon evidence presented, with an opportunity to cross-examine witnesses, to inspect documents or exhibits, and to offer evidence in explanation or rebuttal, and nothing could be treated as evidence which had not been introduced as such.

Parent's Return Not to Be Considered

The commission, in fixing the company's annual return, had considered the amount necessary to enable the company to contribute its share to the over-all return required by the parent company. This was error, held the court, since the company was an independent and distinct utility, and entitled to a fair return upon its intrastate property without regard to the amount contributed to the parent. The fact that the subsidiary had not used its own credit with which to raise additional

capital was immaterial in fixing the return on the company's intrastate property since the company's ability to raise capital could not be measured by the yardstick of the parent's ability.

Hypothetical Debt Ratio

The commission had found that the company would have realized a substantial tax saving and a corresponding increase in its earnings if it had had a capital structure of one-third debt and two-thirds equity, which the commission considered reasonable. The court held that the commission could not arbitrarily disallow federal taxes which the company had paid, or was obligated to pay, by assuming a tax saving under a hypothetical capital structure. Such action was both arbitrary and unlawful.

Since the commission's changed order had not complied with the court's order of transmittal, by reason of the return allowed being less than that determined by the court to be the minimum necessary to provide a reasonable and nonconfiscatory return, and since no consideration had been given to the new items of evidence transmitted, the court was of the opinion that the circuit court's action should be affirmed. *Indiana Pub. Service Commission v. Indiana Bell Teleph. Co. No. 29120, December 1, 1955.*

Increased Costs Plus Increased Income Equal No Rate Increase

THE Montana commission denied a rate increase after determining that a gas company was presently earning a reasonable return on its fair value rate base. The commission considered original cost, original cost less depreciation, reproduction cost, and reproduction cost less depreciation in arriving at fair value.

Accrued Depreciation

The heavy amount of recent construction accounted for a high remaining life of the plant, said the commission, and did not justify the use of the sinking-fund depreciation method since depreciation on the more recent construction was underestimated. This method likewise failed to accumulate adequate depreciation charges. The straight-line method was adopted for determining the present per cent condition of plant.

The commission also held that overheads and charges during construction, such as taxes, interest, and insurance, should be depreciated after being added to the cost of the project upon completion of construction.

Contributions, Improvements, and Working Capital

Contributions in aid of construction were treated in the same manner as they had been treated by the company. They were deducted from plant value without any recognition of current costs.

Improvements to leased property, held the commission, were capital expenses to be added to plant and could not be treated as an operating expense. Remodeling of the company's offices likewise was considered as an improvement to leased property which should have been capitalized.

Cash working capital based on one-eighth of the company's annual operating expenses was considered reasonable, except that no allowance was made for gas purchases which, by agreement, were paid for within three months.

Employee Retirement System

The company had considered a retirement system for its employees but had not established such a system, the company maintaining that if the rates were increased, consideration would be given to starting the system. Retirement systems, said the commission, are becoming standard in industry today and if such a system were inaugurated, the expense would be a proper operating expense. Since the matter was one for management, it was not dependent upon the present application.

It was pointed out, however, that 52 per cent of the expenditure would be represented by reduction in income tax and only 48 per cent would actually come from moneys available to the company when the system was instituted. The latter percentage would then be considered a proper operating expense.

Management and Supervision Expense

The company sought an allowance of $8,000 for management and supervision. This amount had not been charged in the past. The payments were made to two officers of the company for advice and counseling on financial matters. The last financing done by this company was in 1950, and there had been no testimony that any financing was presently being processed. Since there was no testimony by which the commission could measure the services performed for this payment, it was disallowed as operating expense.

Return on Fair Value

In determining fair value, the commission avoided the use of any specific formula, being of the opinion that the weight to be given to any element of value varied, depending upon economic conditions of the particular area served and the company concerned.

The commission concluded that a return of 6.49 per cent would be adequate and reasonable. An increase was not considered justified, however, since the company had added customers and had improvements in income and amounts available for surplus after paying all operating expenses, taxes, depreciation, interest on debt, and dividends.

The company, said the commission, had failed to justify its burden of showing a need for proposed rate increases, either on the basis of rate of return on the fair value of the property or by reason of its current operating conditions. *Re Great Falls Gas Co. Docket No. 4276, Order No. 2529, October 3, 1955.*

Federal Power Commission Rate Order Stayed

THE United States court of appeals has granted Northern Natural Gas Company a partial stay of an order of the Federal Power Commission (9 PUR3d 8) dividing the company's territory into three rate zones. The order placed in effect new rates for each zone, using a differential between the rates of the several zones, with such zone rates to take the place of the previous uniform scheme of rates which the company had been charging throughout its territory generally. The result of the use of the required zone differentials was to reduce rates in two zones and increase rates in the third zone in an approximately corresponding amount.

The company attacked the validity of the order because of its present stage of business development and the propriety of the basis and proceedings by which this was done. The effect of the stay was to permit the company to enjoy the advan-

tage of the higher rates in the one zone while at the same time allowing it to continue to charge the previous higher uniform rates in the other two zones. The court found that there was a reasonable probability of irreparable injury if the stay were not granted with respect to the reduced rate zones.

Protection of Consumers

The distributors in the reduced rate zones were continuing to charge the consumers the same rate as before, pending review, without giving the consumers the benefit of the rate reduction which would accrue to them if the pipeline company's request for a stay should be denied.

The court concluded that in case the order should be affirmed, without a stay having been granted, the court would be in no position to protect ultimate consumers. On the other hand, if the stay were granted, the pipeline company could be required by the court to make refunds to such ultimate consumers. If the order were reversed, the pipeline company would have been protected in its right to receive the funds collected.

The effect of the partial stay was to allow the higher rates in the third zone, and existing rates in the other two zones would not be reduced. *Northern Nat. Gas Co. v. Federal Power Commission, No. 15424, November 18, 1955.*

Application Voluntarily Withdrawn Is Not Subject to "Default" Provision of FCC Rules

THE United States court of appeals reversed an order of the Federal Communications Commission which dismissed with prejudice—dismissed as after hearing and failure—an application for a television station. The case was remanded to the commission for further proceedings in accordance with the court's opinion.

After a date had been set by the commission for hearing on the application, but before a hearing was had, the applicant requested dismissal of its application without prejudice. The commission interpreted this request as a default, under its Rules and Regulations, § 1.363(a), providing, in effect, that an application could not be dismissed with prejudice unless an opportunity had been afforded to be heard and the application had been dismissed "after hearing or default." On this understanding of "default," the commission dismissed the application with prejudice, and the applicant appealed.

That the applicant had no hearing, as contemplated by the quoted provision, was not disputed. The alternative question before the court was whether the applicant committed a default. A default, said the court, in the ordinary terminology which should apply in this case, signifies a failure to appear or plead as required by applicable law, rule, or order. But this definition, it was held, does not describe the conduct of the applicant; his request for dismissal fell, rather, within the meaning of a nonsuit, which is to say merely that the applicant voluntarily abandoned or withdrew from the proceeding.

Such withdrawal did not constitute a default.

The court indicated, moreover, that the meaning of the quoted section should not be extended beyond its fair meaning. Doubts, said the court, should be resolved in favor of the disposition of cases on their merits rather than by default. *Jefferson Amusement Co. v. Federal Communications Commission, 226 F2d 277.*

Conversion to Natural Gas Authorized

THE New Jersey commission adopted its examiner's report and recommendations in authorizing a gas company to change the character and heating quality of gas supplied to its customers so as to permit the service of straight natural gas, or mixed gas having a heating quality exceeding 650 British thermal units per cubic foot. The authorization provided, however, that the company should give notice to the board at least sixty days in advance of the date conversion work would start.

The company was also required to provide for conversion of customers' appliances and equipment so they would function properly on natural gas or a mixed gas exceeding 557 British thermal units per cubic foot, such work to be done at the company's expense and without any direct cost to the customers. This condition, however, would not apply to appliances and equipment of customers in premises that had not previously been served with gas of lower British thermal unit heating quality. The company also was required to file rate schedules appropriate for the new service.

Certificate Requirements

The board noted that the grant of authority in the company's existing certificate specifically referred to "conversion of service" and the authority to change "character and heating quality of gas supplied to its customers." It was concluded that this rather general reference did not apply to service to groups of new customers.

The board said that in view of its finding that the furnishing of either straight natural gas or mixed gas under appropriate conditions and circumstances is "consistent with the public interest and the interest of customers and the general welfare of the state and its citizens," the governing statute did not require the company to apply for authority to extend its mains to serve straight natural gas to new housing developments in its service area. *Re Public Service Electric & Gas Co. Docket No. 8502, October 5, 1955.*

Gas Rate Increase Approved on Cost-of-money Basis

ON its own motion the Massachusetts commission investigated the propriety of new schedules of increased rates filed by a gas distributing company and, finding that they would raise the company's rate of return from 4.31 to only 5.7 per cent on an average net plant investment rate base, ordered them put into effect.

In computing the cost of money to this company, the commission intimated that it would not be realistic to use its actual balance sheet in view of the fact that the company was a subsidiary of a holding company which owned substantially all of its capital stock. Nor did the commission believe that the average earnings-price ratio of a number of gas companies in the general area was fully representative. Using the actual interest rate on its debt and the balance sheet debt ratio, which was 32.4 per cent exclusive of conversion notes, the commission found that the overall cost of money to the company, on this basis, would be 6.2 per cent.

Noting that the debt ratio of the holding company was 57 per cent, according to its consolidated balance sheet, the commission expressed the opinion that the operating company would have to pay substantially more than its present 3⅝ per

cent cost of debt capital for any new debt. Assuming a hypothetical debt ratio of 45 per cent, the commission found, on such basis, that the over-all cost of money would be 5.94 per cent. The real cost of money to the company, then, said the commission, for the purpose of this investigation, must lie between 5.94 and 6.2 per cent. Since the new schedules of increased rates were calculated to produce a rate of return of only 5.7 per cent, which falls below the cost of money to the company, the commission said it had no alternative but to approve the schedule. *Re Mystic Valley Gas Co. DPU 11511, December 8, 1955.*

Permission to Reacquire Outstanding Stock Conditioned upon Discharge of Debt

THE New York commission granted permission to a transit company to reacquire most of its outstanding common stock at a price substantially below book value. Since the stock was not actively traded, a market value could not be established. The company proposed to use surplus funds to make the purchase.

It appeared to the commission that the transaction would be favorable to the company, its customers, and its remaining stockholders. The only matter left for determination concerned the rights of holders of the company's long-term notes. Normally, said the commission, irrespective of a utility's surplus position, it should not be permitted to reacquire its common stock as long as any long-term debt is outstanding.

But because of a time limitation about to expire on the offers of stockholders to sell, the commission did not require in this case that the debt be discharged before the stock was purchased. It did, however, condition its approval of the acquisition upon the company's definite undertaking to take up its notes either by payment in stock (to be authorized on separate application) or in cash. *Re United Traction Co. Case No. 17516, December 6, 1955.*

Carrier Business Expansion by Infringements Rejected As Support for Broader Authority

IN one of two cases heard together, the Maryland commission denied an application by a motor common carrier for additional authority and, in response to the complaint in the other case, ordered the same carrier to cease its infringements upon the territory of the complainant motor common carrier.

The applicant's principal argument in support of its application was based upon the fact that it had been able, by advertising, soliciting, and rendering service, to develop a substantial general hauling business in the other carrier's area. Such business, however, was wholly outside the scope of the applicant's certificate and was illegal. It was shown, on the other hand, that the complainant was amply equipped and was rendering reasonably prompt and satisfactory service.

The commission rejected the applicant's showing as supporting its application. To grant the additional authority requested would, in effect, said the commission, be permitting the applicant to use evidence of its wrongdoing in its own behalf. This, of course, could not be done, for otherwise, as the commission pointed out,

every freight hauler in the state might begin infringing upon the rights of others in order to build up a case to support an application for broader authority.

The fact that the applicant offered certain service improvements or inducements to customers, such as free pick-up service and perhaps prompter hauling in some instances, appeared to carry little weight in the decision of the cases. "Public convenience and necessity," the commission said, "involve more than simply showing that another's business can be taken away from him by one means or another. And it is more than rendering 'better' service." *Tidewater Express Lines, Inc. v. Chesapeake Motor Lines, Inc. Order No. 51813, Cases Nos. 5428, 5433, November 2, 1955.*

Overpayment Recovery Action Held in Abeyance Pending ICC Determination of Reasonable Rates

THE federal government, as a shipper, brought an action to recover for alleged overpayments made to a motor carrier. The evidence showed that, during the years in question, the trucker had transported certain commodities outside the scope of its certificate without obtaining temporary operating rights. Shipments had been made to points beyond established routes and there had been no applicable through rates and joint rates.

The court held that, although it was empowered to entertain actions by shippers to recover freight charges in excess of tariffs filed with the ICC, it had no authority, in such actions, to declare published rates unreasonable or to determine reasonable rates and award damages accordingly. Where a rate is attacked as unreasonable, preliminary resort must be made to the commission.

A shipper is not estopped, said the court, from contesting the lawfulness and reasonableness of interstate freight rates merely because a motor carrier claims it was not required to haul the shipments but was induced to do so by the shipper's payment of the rate and that it would suffer serious losses if the rates were not upheld.

The fact that the transportation was for the federal government did not alter an ICC prohibition against the carriage of goods without a certificate of convenience and necessity or a temporary commission order. Since the transportation was not within the carrier's rights, there were no lawfully published tariffs or rates covering it. In the absence of such rates, there was no issue within the province of the court to decide. *United States v. Garner, 134 F Supp 16.*

State Commission Authorizes Pipeline Construction by Interstate Company

THE New Jersey commission, in passing upon an interstate company's application for authority to construct a natural gas pipeline in certain areas, commented that the commission did not have power to prohibit the proposed line construction.

Since the application had been made by an interstate carrier subject to federal control and regulation, the commission's jurisdiction was confined to such regulation as was necessary for the protection of life, health, and property of state citizens.

The commission found and determined

that the construction of the proposed pipeline, within 100 feet of certain buildings, could not be reasonably avoided. It further found that the construction as proposed conformed to, and in a number of significant respects exceeded, the requirements of the commission's safety rules. The application was granted. *Re Transcontinental Gas Pipe Line Corp. Docket No. 8781, November 18, 1955.*

Water Service Extension Is Company Activity and Not Private Venture

A PRINCIPAL issue before the California commission in a recent certificate case was whether the activities of two of the owners of a water company were private ventures or company activities. The water company had applied for a certificate of public convenience and necessity to service certain areas outside its authorized service zone.

The commission held that the extensions in question, as well as charges that had been made for pipe connections, were to furnish water from the company's system and, therefore, were necessary activities of the company subject to commission regulation. The new customers secured by the owner's activities received water from the company's wells and through its equipment, and paid the company for the water.

The evidence showed that the two owners had accounted for their profits with the third owner of the company. The commission felt that the payments made to the third owner were not made, as the individuals claimed, to fulfill a moral obligation, but because the third individual was considered a party to the transactions. The only connection between the three individuals was the water company, which further strengthened the commission's opinion that the acts in question were company activities.

Certificates Granted

The commission granted two certificates of public convenience and necessity, one to the water company after it had found that it was, in fact, providing a public utility water service in certain areas and that its supply was adequate to provide the service. The other certificate was granted to the third owner of the company, as an individual, on condition that he install adequate facilities.

What constituted adequate facilities was discussed by the commission. The third owner of the company had contracted with the company to install and transfer to the company reservoir facilities of acceptable size and specifications. The individual had installed a tank which the company did not consider adequate. Whether or not an individual can be required to specifically perform a contract made with a utility, said the commission, or whether or not he is liable in damages, are clearly problems which can only be carried to an ultimate conclusion by the courts.

However, the commission made it clear that it had the authority to determine whether or not the facilities of a water utility are adequate, and to place conditions upon the entrance of an individual into operations as a regulated utility. Having determined that the storage tank erected by the individual was not adequate to properly service the area, the certificate was granted upon condition that another tank of substantially greater dimensions be installed. *Anderson v. Yucca Water Co. Ltd. Decision No. 52021, Case Nos. 5516, 5518, Application Nos. 35274, 36203, October 4, 1955.*

Federal Power Commission Reduces Bond Requirement For Proposed Gas Rate Increase

THE Federal Power Commission reversed a decision of its presiding examiner by ruling that a surety bond of $41,000 originally filed by Dorchester Corporation, an independent gas producer, in connection with a proposed rate increase, was proper rather than a $742,000 bond which the examiner had deemed necessary.

The proceeding related to a proposed increase in rates charged for gas sold to a pipeline company. The producer filed, under Order No. 174-A, a basic contract providing for the sale of natural gas to the pipeline company. The price was 6.253 cents per Mcf.

Also filed was a copy of an order of the Oklahoma state commission fixing a minimum wellhead price of 9.8262 cents per Mcf. The examiner had held that the rate of 6.253 cents per Mcf was the effective rate to be used for the purpose of requiring a bond when the company filed the new and higher rate. The commission held, however, that the rate of 9.8262 cents was the effective rate for this purpose.

Rate Filing

The commission held that there can be only one filed rate under which a particular sale of natural gas may be made. A policy of accepting rate filings tentatively, subject to later and final acceptance of the rate found to be proper, would be unworkable administratively, and would be of questionable legality, in view of the statute providing that acceptance for filing of any rate schedule is not to be construed as approval.

The commission said that the fact that the 9.8262-cent rate was paid under protest, or that a lesser amount was paid for a while shortly thereafter, or that the basis for the rate [Oklahoma minimum wellhead price order] was subsequently determined to be invalid (8 PUR3d 7) does not require or permit it in this proceeding to determine what the lawful or the just and reasonable rates should have been.

The filing of the new rate, and commission acceptance for filing, constitutes compliance with Order No. 174-A, but that does not constitute a determination of the proper contractual rate or the just and reasonable rate. The commission concluded that in order that all parties similarly situated might be treated alike, the filed rate should be compared with the increased rate filed later, for the purpose of determining the amount of the bond which the producer must file, in order to place and keep its increased rates in effect.

It observed that it had no power to award reparations, and could not fix rates retroactively. Therefore, it said, its authority to require the producer to reduce rates or refund to the pipeline company would be limited to the period when the suspended new rates became effective subject to refund under bond. *Re Dorchester Corp. Docket No. G-6505, November 14, 1955.*

Management Best Equipped to Estimate Effect of Higher Transit Fares

THE number of passengers to be carried in the future was arrived at by a transit company by first computing the decline in patronage for the first six

months of 1955 as compared with the same period in 1954. To these figures, the company had applied the Curtin formula, and had then applied the resultant estimated induced passenger loss to the estimated passengers for the full year of 1955.

The Massachusetts commission commented that estimates of this nature depended fundamentally upon an intimate knowledge of the local territory. The local managers, it was thought, were in far better position to exercise such judgment. Accordingly, the commission accepted the company's estimates, modified only as to income from pupils' tickets. Use of the company's facilities by pupils, a number of whom had their passage paid for by the municipality, was excluded from the estimated induced decline.

The commission found that the company, with the proposed fare increase, would be operating at a ratio of 96.17 per cent after interest and taxes. The indicated net income would represent a return of about 12 per cent on capital stock, and the net operating revenues a return of about 11 per cent on net book value. The commission did not think this operating ratio reflected the effects of fare schedules higher than reasonable and necessary. *Re Fitchburg & Leominster Street R. Co. DPU 11474, November 15, 1955.*

Commutation Fares of Intrastate Airline Increased Along with Liability and Service Changes

AN application filed by an intrastate airline company requesting an increase in commutation fares was granted by the California commission, together with authority to make certain changes relating to service and liability. The airline operates between Los Angeles, Burbank, and Long Beach on the one hand, and Santa Catalina Island on the other hand.

At the outset of operations earlier in the year, the company had fixed the commutation fares at 50 per cent of the one-way fares without giving adequate consideration to prospective operating costs. The fares proved to be unreasonably low. It was expected that commuter travel would constitute a substantial portion of the company's transportation during the approaching off-season months. For this reason and because considerable losses had been sustained at regular fare rates since the beginning of operations, the commission was of the opinion that the existing commutation rates would become a severe burden on the airline's service. An increase in these rates to about 80 per cent of one-way fares was therefore authorized.

Service Adjustments

Besides authorizing higher fares, the commission authorized the company to eliminate restrictions making the commutation service subject to space available. This change placed the commutation service on a parity with service at regular fares.

A request to adjust certain scheduled flights to an on-call basis was granted. This would allow the service to conform to the needs of patrons while permitting the company to avoid the cost of flights which the traffic did not require.

Liability Changes

The applicant proposed to restrict its liability for death, injury, or delay of passengers to the amount of its insurance coverage and to restrict its liability for baggage and other personal property to the declared value, not exceeding $100.

The commission thought the proposal as to passenger liability was of "questionable validity," related as it was to the carrier's insurance. It was rejected.

While the commission considered the baggage restriction proposal to be unduly restrictive and therefore denied that proposal as such, it did, however, authorize the company to establish limits upon its liability for property loss which generally conformed to those limits maintained by other California airlines. *Re McBain Aviation, Inc. Decision No. 52177, Application No. 37071, November 1, 1955.*

Transfer of Duplicating Carrier Authority Allowed as Exception to Usual Policy

CONTRARY to its usual policy, the Colorado commission authorized the transfer of a duplicating private carrier permit, which at the time was inactive, to a common carrier. The commission indicated, however, that it took this "unusual action" with misgivings and asserted that this case should not be regarded as precedent for any other.

The usual policy in such cases as this is to require that any duplication of private carrier and common carrier permits be eliminated at the time of transfer by cancellation of the private carrier authority.

"The reason for this policy," said the commission, "is clear and sound; to do otherwise would allow the carrier to herd business from one service to the other" as might best serve its convenience and profit, to the injury of the public service.

The commission thought, however, that the peculiar facts and circumstances of this case warranted making an exceptional ruling. The common carrier—the transferee—was shown to be a large, stable, and well-managed enterprise, and it agreed to use the duplicate authority only as a supplement to, and not as an alternative for, its common carrier operations. The public service, therefore, would not suffer, it was contended. It was shown also that the territory involved would not support two line-haul carriers, and it appeared that elimination of the competitive element might result in improved service.

Allowing, then, the requested transfer without cancellation, the commission nevertheless retained continuing jurisdiction of the matter, so that if the transfer should in fact operate to the disadvantage of the public service, the private permit could be properly canceled. *Re Banta (Red Mountain Motorways) Application No. 13489-PP-Transfer, Decision No. 44669, September 29, 1955.*

Truck Leasing Device Unsuccessful in Evading Carrier Regulation

ON the complaint of a prosecuting attorney, the Ohio commission ruled that a truck leasing arrangement between a company and a number of dump truck owners, though intended to evade public utility regulation, actually resulted in "transportation for hire" operations subject to the commission's jurisdiction.

The company, under contract to supply crushed stone to a government installation, became dissatisfied with the service of the motor common carriers in the area and was determined to conduct the necessary transportation operation itself. The

company thereupon leased a number of dump trucks from uncertificated owners and hired the owners as drivers of their trucks. The company paid social security, withholding tax, and unemployment insurance on all of such owner-operators and carried full public liability insurance on the equipment. It supervised the new operation with a high degree of control, though the owners continued to supply oil, gas, and maintenance for the trucks.

The commission found that this lease device was used for the primary purpose of evading public utility regulation. This is demonstrated, said the commission, in part at least, by the fact that the company began using common carrier service before venturing upon the lease arrangement. The court indicated that the combination of facts in the arrangement, and particularly the hiring of the dump truck owners as drivers, together with the intent of the parties, compelled the conclusion that the operation constituted "transportation for hire," within the meaning of applicable statute law. The leasing of the trucks under the circumstances thus shown was therefore determined to be unlawful until such time as the owners should obtain private motor carrier permits. *Bevens v. Lewis Van Meter, No. 24,928, October 14, 1955.*

Rate Zones Established for Livestock Hauling

THE Colorado commission has prescribed zone rates for trucking livestock to eliminate confusion as to what rate was legal. Over a period of several years there had been amendments and exceptions to tariffs applicable to the movement of livestock. As a result of these changes, it appeared to the uninstructed that there were several methods of calculating the rates, whereas, in fact, the application of the technical rules of tariff construction would result in the determination of a single legal rate.

The nature of the traffic was such that neither the shippers nor the carriers could properly be expected to be familiar with these technical rules. Consequently, different rates were being charged by different carriers in the same area for substantially similar shipments.

Under the zone rates a rancher or carrier would need only to know the zone, the weight, and type of livestock to determine quickly and easily what the rates should be.

The commission's staff proposed to continue the existing level of rates. It was pointed out, however, that in one zone, because of a fierce and unlawful competitive situation, a local trucker found it necessary to reduce his rates to a noncompensatory level. Although in other areas truckers had, in fact, been charging higher than legal rates, they were not making exorbitant profits. Consequently, all carriers urged the commission to adopt higher rates. Thus, the commission recognized that if it adopted its staff's proposal, it might cause the existing service to suffer or be eliminated entirely. This would hurt not only the truckers but also the stockmen.

Rate Increase

The commission's concern was to provide a level of rates which would allow a reasonable return to the truckers and yet provide adequate service at reasonable prices to the stockmen. It established the level of rates at 2 cents per zone higher than proposed by its staff, although recognizing the fact that this would be less satisfactory to both the stockmen and the truckers than anything either of them had

proposed. It planned to maintain this level of rates until enough experience could be obtained to determine whether, on the one hand, the level of rates would be compensatory to the truckers and, on the other hand, whether it would result in serious injury to the stockmen. If either eventuality should occur, it would, of course, reopen the matter for further study. *Re Livestock Rates in Eagle and Pitkin Counties, Case No. 1585, Decision No. 44720, October 10, 1955.*

Refunding of Short-term Debt Authorized in Face of Low Earnings and High Debt Ratio

Two small telephone companies applying to the Wisconsin commission were authorized in separate orders to issue substantial amounts of their 4½ per cent first mortgage notes to be amortized over a 20-year period, in order to secure funds to pay short-term debt incurred for plant improvements. One company, whose net income would not be sufficient to cover the fixed charges for principal and interest on the new debt, was further authorized to issue sufficient common stock to pay a considerable portion of the principal of the new debt as it should fall due. The commission observed that the new financing would result in a high debt ratio for this company, the figure being 58.6 per cent; however, provision was made for complete amortization of the debt, and earnings would be adequate to meet interest requirements.

The other company appeared to be on sounder financial ground. Its net annual operating income was computed at about twice the principal and interest charges, and its resultant debt ratio was considered reasonable. *Re Cuba City Teleph. Exchange Co. 2-SB-617, November 17, 1955; Re Cumberland Teleph. Co. 2-SB-621, December 7, 1955.*

Other Recent Rulings

Rate Increase Unsupported. The North Carolina supreme court affirmed a lower court decision which held arbitrary and capricious an order of the state commission granting intrastate rate increases to railroads in the absence of evidence as to the fair value of their respective properties separate and apart from their interstate business. *North Carolina ex rel. Utilities Commission et al. v. North Carolina et al. 89 SE2d 727.*

State Apportionment Statute Inapplicable. In two cases involving the construction of railroad grade separations, the Missouri commission held that a state statute limiting the portion of the cost which may be apportioned to the highway commission was inapplicable because federal funds were to be used subject to federal requirements relating to apportionment of costs. *Missouri State Highway Commission v. Terminal R. Asso. of St. Louis, Case No. 13,144, November 15, 1955; Missouri State Highway Commission v. St. Louis-S. F. R. Co. Case No. 13,197, November 22, 1955.*

Court Applies Freight Rate. The federal district court, in an action by a railroad to recover shipping charges, ruled that it had jurisdiction to determine which of two rates applied to a shipment of spoiled paper cups intended to be used as

waste paper and that the action of the Interstate Commerce Commission dismissing a complaint and holding merely that the higher of the two rates was reasonable for the commodity to which it applied, was not conclusive. *Reading Co. v. Penn Paper & Stock Co. 134 F Supp 239.*

Refund Ordered. Upon complaint by a water user seeking a refund of certain sums paid to a village water utility for a main extension, the Wisconsin commission, in the absence of relevant rules of the village being lawfully filed, considered the village ordinance as an indication of water-main extension policy and ordered a refund accordingly. *McCormick v. Village of Monona, 2-U-4435, November 25, 1955.*

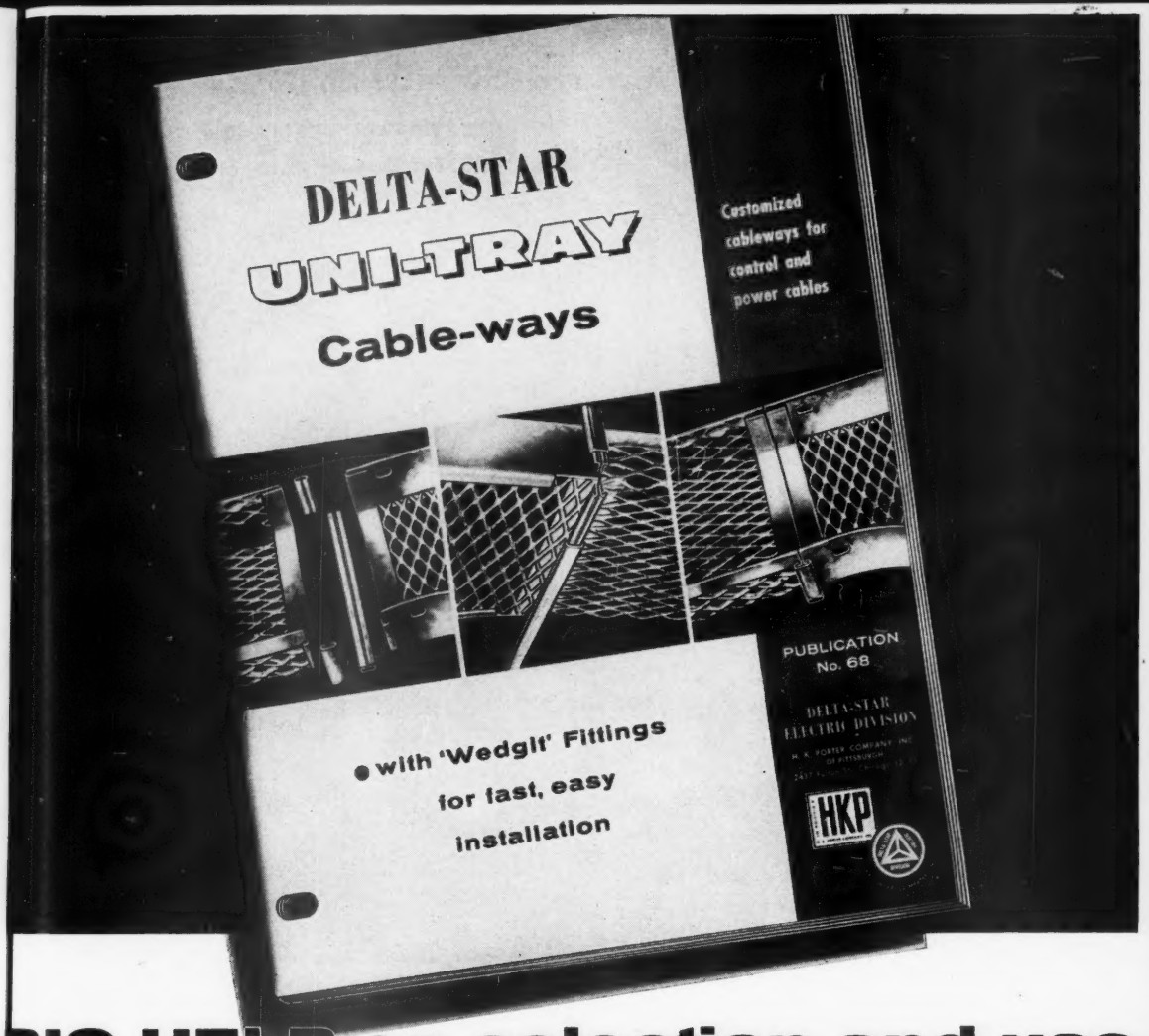
Findings Required for Certificate. The supreme court of New Mexico held that the absence of specific findings of fact did not invalidate a commission order granting a certificate where no findings were requested or tendered and the finding of ultimate fact of public convenience and necessity was inherent in the order. *Ferguson-Steere Motor Co. v. New Mexico State Corp. Commission, 288 P2d 440.*

Motor Carrier Entitled to Injunctive Relief. A holder of a federal motor carrier permit issued under the grandfather clause of the Motor Carrier Act was held by the United States district court to be entitled to an injunction against the arrest of its drivers by state officers on charges that transportation was not authorized under a state permit containing identical commodity descriptions, pending final determination of an ICC proceeding involving the question whether a substantial part of the interstate transportation business built up by the carrier's predecessor in interest was within the scope of authority granted in its permit. *Nelson v. Jessup, 134 F Supp 221.*

Franchise Requirement for Use of Streets. The Oklahoma supreme court held that where a board of county commissioners had authorized an electric co-operative to furnish service to all parts of the county and to use, for such purposes, the roads of the county, including those in an unincorporated town, the subsequent incorporation of that town did not render the co-operative's use of the streets, to the extent of use as of the date of incorporation, illegal, and the co-operative could continue to use those streets for the purpose of furnishing service despite the fact that the incorporated town had not granted it a franchise. *Town of Gans v. Cookson Hills Electric Co-op. 288 P2d 707.*

Passenger Trains Discontinued. The Missouri commission authorized the discontinuance of certain passenger trains producing revenues amounting to less than one-tenth of the out-of-pocket loss occasioned by their operation, since the meager public use of the trains indicated that they were not required by public convenience and necessity. *Re Chicago, B. & Q. R. Co. Case No. 13,223, November 7, 1955.*

Reflectorized Signs for Grade Crossings. The Missouri commission, in authorizing the construction of a grade crossing over a double railroad track, giving direct access to a developing industrial district, required merely that reflectorized warning signs be installed though rail traffic numbered at least 19 scheduled trains a day, including fast passenger trains, and automobile traffic crossing the tracks amounted to more than 200 vehicles daily. *City of Independence v. Missouri P. R. Co. Thompson, Trustee, Case No. 13,132, November 3, 1955.*



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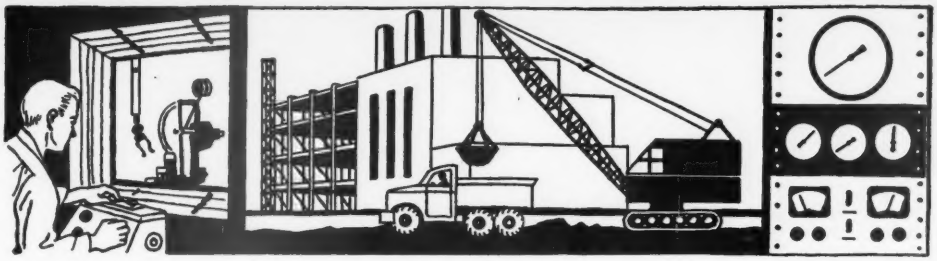

Industrial Progress

acific G. & E. Plans $130,000,000 Outlay On Construction in '56

ACIFIC Gas & Electric Co. will pend nearly $130,000,000 for new onstruction in 1956, Norman R. utherland, president and general anager, reported recently.

This is about the same amount the ompany spent for construction in 955 and brings its total for the post-ar period to $1,600,000,000, he dded.

The new year's plans include the rst phase of a $20,700,000 expansion f the company's "super inch" pipe-ne which carries natural gas from he California-Arizona border to San rancisco Bay. The first expansion, o be completed by November this ear, is part of a program to increase he lines daily capacity by 50 million ubic feet from the present 700 mil-ion cubic feet daily.

No. Illinois Gas Plans Outlay Of $74,000,000

AN estimated $74,000,000 will be pent on construction by Northern llinois Gas Company in the next four ears, according to Marvin Chandler, resident. Approximately $21,000,000 f the total outlay will be spent next ear.

The proposed expenditures will ring gross additions to the plant ince Northern Illinois Gas began op-rations February 1, 1954, to more han $100,000,000.

P. S. of Colorado Plans Record Construction in '56

PUBLIC Service Company of Colo-ado has announced that it will spend record $27,400,000 on new construc-ion in 1956. John E. Loiseau, presi-lent, said the budget calls for $20,-200,000 for electric expansion, $5,-000,000 for natural gas system ex-pansion and $1,300,000 for new lines, transformers and other equipment.

The company added 15,000 gas customers and 13,000 new electric customers in the Denver area in 1955.

Electric Industry Launches Campaign to Increase Residential Use of Electricity

SOME 70 individual electric utility companies will launch a broad industry movement aimed at increasing the residential use of electricity when they stage simultaneous meetings February 8th in more than 80 cities across the country.

Highlight of each meeting will be a closed circuit telecast with TV personality John Daly as Master of Ceremonies.

The movement, built around the theme, "Live Better . . . Electrically," is designed to stimulate participation by manufacturers, home builders, contractors, architects, electrical distributors, dealers, realtors and lending institutions in selling the benefits of increased electrification to the American Home owner.

An estimated 35,000 such businessmen are expected to attend the kick-off meetings at which the special TV show will serve to dramatize the opportunities for accelerated marketing of electrical goods and services in residential areas and the benefits to be derived. Following the telecast, they will hear executives of the individual utilities outline their own plans of action and will be invited by them to participate locally in the long range project.

The "Live Better . . . Electrically" promotion will function at the direction of each sponsoring utility company in its own area.

According to Harllee Branch, Jr., president of Edison Electric Institute, who also will appear on the closed show, the coordinated effort will involve intensive local activities against a background of national promotion including trade and consumer advertising.

The industry spokesman stressed his belief that success of the overall program would hinge largely on the extent of local cooperative action by utilities and their trade associates.

In discussing the timeliness of the movement, Mr. Branch noted that the "Size and stability of the residential electrical market, coupled with expanding home construction and modernization required by our steadily increasing population, indicate the need for an integrated approach toward mass market development by the whole industry."

It is expected that a large number of manufacturers, trade associations, and professional societies will become active participants in the "Live Better . . . Electrically" program as it develops.

In addition to Mr. Branch, several other business and industry spokesmen will appear on the February 8th closed circuit telecast, which is scheduled for 2 p.m. EST.

Baltimore Gas & Electric Orders 125,000 Kw Generator from G-E

BALTIMORE Gas and Electric Co. of Baltimore, Md., has ordered a 125,000 kilowatt steam turbine-generator from the large steam turbine-generator department of the General Electric Company.

When installed at the Herbert A. Wagner station in Greater Baltimore, the steam turbine-generator will furnish the average yearly electricity needs for more than 206,000 persons.

The turbine for the 160,000-kilovolt ampere generator will be of the 3600-rpm tandem compound, double-flow, reheat type. In this design the steam enters the high-pressure section of the turbine with a pressure of 1800 psig and a temperature of 1000° F, and after passing through the high-pres-

(*Continued on page* 30)

sure section, it returns to the boiler to be reheated to 1000° F. The steam then reenters the turbine, passes through the double-flow, low-pressure section, from where it exhausts to the condenser.

$37,000,000 Program Planned By Delaware Pwr. & Lt.

THE Delaware Power and Light Company plans to spend more than $37,000,000 for new construction in 1956, it was disclosed recently by Stuart Cooper, president of the utility company.

Two new electricity generating stations will consume the bulk of the expenditure, said Mr. Cooper. One station will be located near the Tide Water Associated Oil Company refinery under construction at Delaware City.

The plant, scheduled for completion late in 1956, will generate 50,000 kilowatts in addition to supplying steam heat to Tide Water for its refining operations. The plant will cost an estimated $22,000,000.

The second plant will be built in southern Delaware on the Indian river and scheduled for completion in 1957. It will generate about 80,000 kilowatts and cost $17 million.

Overall expenditures also provide for expansion and improvement of the company's transmission and distribution facilities.

How to Cut Piping Costs Subject of Kellogg Brochure

HOW processing and power piping costs can be reduced substantially—in materials, design and construction—is the subject of a new 12-page brochure published by The M. W. Kellogg Company.

The publication details the Kellogg "general analytical method of piping flexibility analysis," which represents one of the most comprehensive approaches devised for evaluating stresses, reactions and deflections in complex piping networks.

This analysis involves the development and solution of simultaneous equations for determining forces and moments in the piping system. From these forces and moments, stresses and deflections are calculated.

Since the analyses are not based on approximations or "short-cut" calcul tions, it is possible to specify mo closely to the theoretically perfect pi ing design, thereby avoiding excessi and costly margins of safety.

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HANDY adhesive check-off labe for oil circuit breaker maintenan are now available free of charge utilities from Allis-Chalmers Man facturing Company.

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(*Continued on page 32*)

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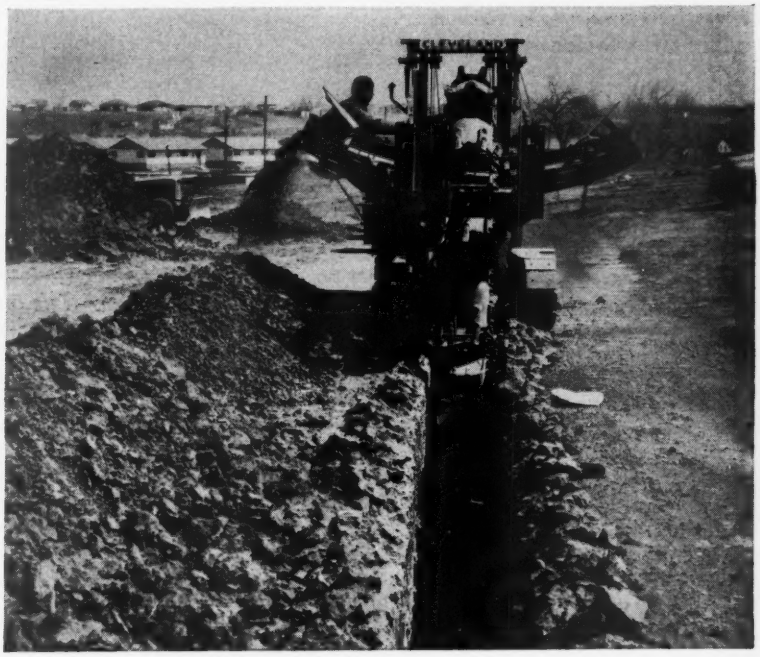
0 feet of complete pipeline nstruction—trench digging, pipe- ing, backfilling and backfill mpaction—is an average day's rk for each crew of F. H. Linne- n, Inc., pipeline and utilities ntractor of Denver. Most of this rk is on 2-, 4- and 6-inch pipe- es for the many new housing velopments in the Denver area.

th a Cleveland Trencher open- up trench at an average rate 20 feet per minute, a typical neman crew will do 2, 3 or 4 mplete pipeline jobs in an 8-hour y—jobs that run from 50 to 1000 t each in length. One of these ws has a record day's produc- n of 7 complete jobs.

rrently operating 7 Cleveland nchers, Linneman specializes utilities work—gas, water and wer line construction. Equipment- nded and especially mainte- nce-conscious, he has consist- ly employed Clevelands ever nce he began his contracting siness in 1946.



st portability of equipment is essential Linneman's tight-scheduled opera- ons. His Clevelands can be loaded on eir low-bed trailers in less than 10 inutes time, ready to roll safely from b to job at legal limit speeds.

"Maintenance costs on Clevelands are appreciably lower" says owner of 7

Here is what F. H. Linneman has to say about trenchers:

"In the type of work we most generally perform, in the city especially, we have found Clevelands best suited to our operations because of their narrow-width construction, compactness and speed. They enable us to work in close places and keep trenching ahead of follow-up operations, a decided advantage.

"We have employed Clevelands in our work since we began contracting in 1946. We have seven of them at the present time, the oldest being a Cleveland Model 95 purchased in 1948. We have no record of the miles this machine has dug, but feel that it would be a near-record. Our maintenance costs on it have been extremely low.

"Our over-all maintenance costs on Clevelands are appreciably lower than on other trenchers we have operated. This is another reason why we have purchased more Clevelands than any other make. We have also found it easier to train operators for Clevelands than for any other make. Our newest Cleveland, a "240," was delivered only last week by H. W. Moore Equipment Co., here in Denver."

THE CLEVELAND TRENCHER COMPANY • 20100 St. Clair Ave. Cleveland 17, Ohio

CLEVELAND

breaker shipped has an initial supply, but reorder cards on the pads will permit new orders to be obtained from Boston Works.

S. Morgan Smith Co. to Build 4 Turbines for Snake River Project

A CONTRACT for four Francis-type turbines, valued at about $3,000,000 has been awarded the S. Morgan Smith Company, York, Pa., by the Idaho Power Company.

The four units, most powerful Francis-type ever built by S. Morgan Smith, have a total rated output of 576,000 horsepower. They will be used in the Brownlee Hydro-Electric Development on the Snake river at the first of three proposed dams to be constructed in the Hell's Canyon project. This first installation will be in a rugged, relatively undeveloped area in the Snake River Canyon about 35 miles upriver from Payette, Idaho.

The turbines each have a runner outlet diameter of 184 in. and will be mounted vertically. They will operate at 128.6 rpm under a 250 ft. head of pressure. Each turbine is rated at 144,000 hp. output. Estimated completion date of this contract will be late 1957.

Abrams Issues Brochure on Use of Aerial Photography

MAPPING by use of aerial photography and photogrammetry and the equipment used in this work is explained and illustrated in a new 8-page brochure "Serving the Engineering Profession."

The booklet includes examples of topographic maps of one-foot precision, planimetric, photographic mosaic maps and plan and profile sheets as products of the airborne camera.

A copy will be mailed upon request by Abrams Aerial Survey Corporation, Lansing 11, Michigan.

Ohio Bell to Spend $79,000,000 For Buildings and Equipment

OHIO Bell Telephone Company plans to spend $79,000,000 in 196 new buildings, dial equipment and additional cable and telephone lines. This compares with the $65,000,000 spent in 1955 for similar improvements.

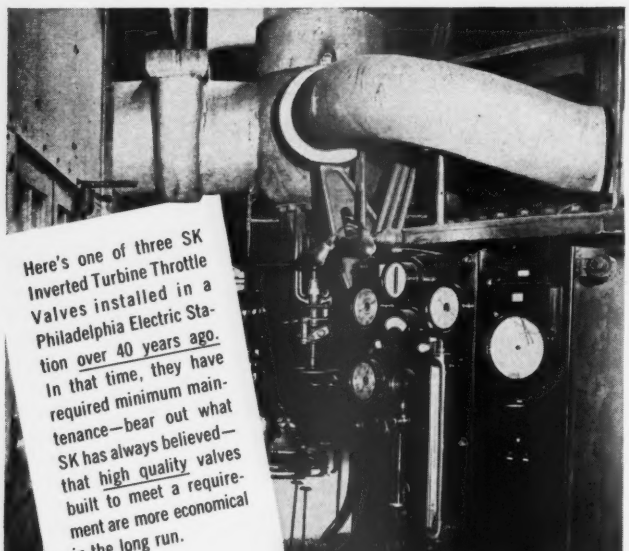
Of the total $20,000,000 will be spent in the Cleveland area exceedi the 1955 amount by $6,000,000. T increase in capital expenditures, a cording to a company official, was r quired by "continued heavy dema for service caused by the growth residential areas and industrial d velopment."

Utilities Division Formed In Northeastern Ohio

Acting on the need for diversifi discussion on overall activities in t utilities field, the Cleveland Engine ing Society has announced the fo mation of a Utilities Division.

Designed to bring together men the Northeastern Ohio utility field, t new group will cover specializ interests not within the scope of e ising organizations, according Warren H. Chase, president of t society and vice president of the Oh Bell Telephone Company.

Preliminary planing for the ne division is under the temporary chai manship of Clarence J. Beller, vi president of electrical operation a engineering, Cleveland Electric Illu inating Company.



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Canute, the Dane who in early times was England's king, is best remembered for the time when he sat down near the incoming ocean waves and bade them come no nearer. This the humble king did to prove to his overflattering courtiers that he had no control over the tides . . .

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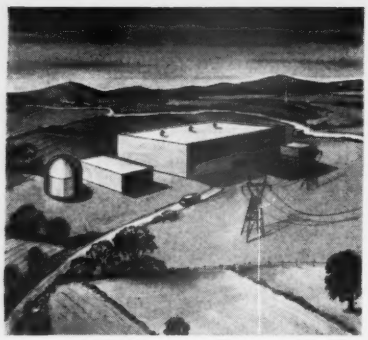

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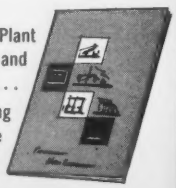

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